



Qy 132 CATCACTTGTCTGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAAACC 191  
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 Db 138 CATCACTTGTCTGGGCGAGTCAGGGTATTAGCAGCTGGTTAGCCTGGTATCAGCAGAAACC 197  
 Qy 192 AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC 251  
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 Db 198 AGGGAAAGCCCCTAAGCTCCTGATCTATGATGCATCCAGTTTGCAAAGTGGGGTCCCATC 257  
 Qy 252 AAGGTTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 311  
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 Db 258 AAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 317  
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 Db 378 AGGGACCAAGGTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 426

# RESULT 8

BC073764

LOCUS BC073764 936 bp mRNA linear PRI 30-JUN-2004

DEFINITION Homo sapiens cDNA clone MGC:88771 IMAGE:4576136, complete cds.

ACCESSION BC073764

VERSION BC073764.1 GI:49256424

KEYWORDS MGC.

SOURCE Homo sapiens (human)

ORGANISM Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

REFERENCE 1 (bases 1 to 936)

AUTHORS Strausberg,R.L., Feingold,E.A., Grouse,L.H., Derge,J.G.,  
 Klausner,R.D., Collins,F.S., Wagner,L., Shenmen,C.M., Schuler,G.D.,  
 Altschul,S.F., Zeeberg,B., Buetow,K.H., Schaefer,C.F., Bhat,N.K.,  
 Hopkins,R.F., Jordan,H., Moore,T., Max,S.I., Wang,J., Hsieh,F.,  
 Diatchenko,L., Marusina,K., Farmer,A.A., Rubin,G.M., Hong,L.,  
 Stapleton,M., Soares,M.B., Bonaldo,M.F., Casavant,T.L.,  
 Scheetz,T.E., Brownstein,M.J., Usdin,T.B., Toshiyuki,S.,  
 Carninci,P., Prange,C., Raha,S.S., Loquellano,N.A., Peters,G.J.,  
 Abramson,R.D., Mullahy,S.J., Bosak,S.A., McEwan,P.J.,  
 McKernan,K.J., Malek,J.A., Gunaratne,P.H., Richards,S.,  
 Worley,K.C., Hale,S., Garcia,A.M., Gay,L.J., Hulyk,S.W.,  
 Villalón,D.K., Muzny,D.M., Sodergren,E.J., Lu,X., Gibbs,R.A.,  
 Fahey,J., Helton,E., Kettelman,M., Madan,A., Rodrigues,S.,  
 Sanchez,A., Whiting,M., Madan,A., Young,A.C., Shevchenko,Y.,  
 Bouffard,G.G., Blakesley,R.W., Touchman,J.W., Green,E.D.,  
 Dickson,M.C., Rodriguez,A.C., Grimwood,J., Schmutz,J., Myers,R.M.,  
 Butterfield,Y.S., Krzywinski,M.I., Skalska,U., Smailus,D.E.,  
 Schnerch,A., Schein,J.E., Jones,S.J. and Marra,M.A.

TITLE Generation and initial analysis of more than 15,000 full-length  
 human and mouse cDNA sequences

JOURNAL Proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002)

PUBMED 12477932

REFERENCE 2 (bases 1 to 936)

AUTHORS Strausberg,R.

TITLE	Direct Submission
JOURNAL	Submitted (23-JUN-2004) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590, USA
REMARK	NIH-MGC Project URL: <a href="http://mgc.nci.nih.gov">http://mgc.nci.nih.gov</a>
COMMENT	Contact: MGC help desk Email: <a href="mailto:cgapbs-r@mail.nih.gov">cgapbs-r@mail.nih.gov</a> Tissue Procurement: Louis Staudt cDNA Library Preparation: Rubin Laboratory cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Sequencing Group at the Stanford Human Genome Center, Stanford University School of Medicine, Stanford, CA 94305 Web site: <a href="http://www-shgc.stanford.edu">http://www-shgc.stanford.edu</a> Contact: (Dickson, Mark) <a href="mailto:mcd@paxil.stanford.edu">mcd@paxil.stanford.edu</a> Dickson, M., Schmutz, J., Grimwood, J., Rodriguez, A., and Myers, R. M.

Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: <http://image.llnl.gov>  
Series: IRAL Plate: 58 Row: c Column: 10  
This clone was selected for full length sequencing because it passed the following selection criteria: GenomeScan gene prediction, Similarity but not identity to protein.

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1. .936

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## ORIGIN

89.0%; Score 373.8; DB 9; Length 936;

Matches 387; Conservative 0; Mismatches 22; Indels 0; Gaps 0;

Qy 12 CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 71

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Qy 72 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 131

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CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 136





# ORIGIN

Query Match 88.2%; Score 370.6; DB 6; Length 974;  
 Best Local Similarity 94.1%; Pred. No. 1.3e-112;  
 Matches 385; Conservative 0; Mismatches 24; Indels 0; Gaps 0;

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## RESULT 10

AX306529  
 LOCUS AX306529 974 bp DNA linear PAT 11-DEC-2001  
 DEFINITION Sequence 29 from Patent WO0187981.  
 ACCESSION AX306529  
 VERSION AX306529.1 GI:17645749  
 KEYWORDS .  
 SOURCE Homo sapiens (human)  
 ORGANISM Homo sapiens  
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.  
 REFERENCE 1  
 AUTHORS Tsuji,T., Tezuka,K. and Hori,N.  
 TITLE Human monoclonal antibody against a costimulatory signal  
 transduction molecule ailim and pharmaceutical use thereof  
 JOURNAL Patent: WO 0187981-A 29 22-NOV-2001;  
 Japan Tobacco Inc. (JP)  
 FEATURES Location/Qualifiers  
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ORGANISM Homo sapiens  
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

REFERENCE 1 (bases 1 to 974)

AUTHORS Tsuji,T., Tezuka,K. and Hori,N.

TITLE Human monoclonal antibody against constimulation transducer  
molecule AILIM and medicinal utilization thereof

JOURNAL Patent: JP 2002034581-A 28 05-FEB-2002;  
JAPAN TOBACCO INC

COMMENT OS Homo sapiens (human)  
PN JP 2002034581-A/28  
PD 05-FEB-2002  
PF 30-MAR-2001 JP 2001099508  
PI TAKASHI TSUJI,KATSUNARI TEZUKA,NOBUAKI HORI  
PC C12N15/09,A61K31/7088,A61K38/00,A61K39/395,A61K39/395,A61K45/  
PC 00,A61P37/08,  
PC A61P43/00,A61P43/00,C07K16/28,C07K16/46,C07K19/00,C12N5/10, PC  
C12N15/02,  
PC  
C12P21/08,G01N33/15,G01N33/50,G01N33/53,G01N33/566,G01N33/577// PC  
(C12P21/08,C12R1:91),C12N15/00,A61K37/02,C12N5/00,C12N15/00 CC  
Human monoclonal antibody against constimulation transducer CC  
molecule AILIM  
CC and medicinal utilization thereof  
FH Key Location/Qualifiers  
FT 5'UTR (1)..(38)  
FT CDS (39)..(749)  
FT 3'UTR (750)..(974)  
FT sig\_peptide (39)..(104).

FEATURES Location/Qualifiers  
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# ORIGIN

Query Match 88.2%; Score 370.6; DB 6; Length 974;  
Best Local Similarity 94.1%; Pred. No. 1.3e-112;  
Matches 385; Conservative 0; Mismatches 24; Indels 0; Gaps 0;

Qy 12 CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 71  
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Db 44 CATGAGGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 103

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 Db 344 TGAAGAT TTTGCA ACTTAC TATTGT CAACAG GCTAAC AGTTT CCCGTG GACGTT CGGCCA 403  
 Qy 372 GGGAACCA AGCTGG AGATCAA ACGAA CTGTGG CTGCACC ATCTGT CTTT 420  
 Db 404 AGGGACCA AGGTGG AAATCAA ACGAA CTGTGG CTGCACC ATCTGT CTTT 452

## RESULT 12

S59162

LOCUS	S59162	433 bp	mRNA	linear	PRI 26-JUN-2000
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DEFINITION. Ig V kappa =anti-single/double-stranded DNA antibody NE-13 light chain variable region [human, B-cells, mRNA Partial, 433 nt].

ACCESSION S59162

VERSION S59162.1 GI:299955

## KEYWORDS

SOURCE Homo sapiens (human)

ORGANISM Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

REFERENCE 1 (bases 1 to 433)

AUTHORS Hirabayashi, Y., Munakata, Y., Takai, O., Shibata, S., Sasaki, T. and Sano, H.

TITLE Human B-cell clones expressing lupus nephritis-associated anti-DNA  
idiotypes are preferentially expanded without somatic mutation

JOURNAL Scand. J. Immunol. 37 (5), 533-540 (1993)

MEDLINE 93248539

PUBMED 8387226

REMARK GenBank staff at the National Library of Medicine created this entry [NCBI gibbsq 130630] from the original journal article. This sequence comes from Fig. 6.

## FEATURES

Location/Qualifiers

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gene

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/gene=" Iq V kappa "

CDS

1. .>433

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/note="mismatches (74 [Y->T], 122 [N->D]) ; conceptual
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translation presented here differs from translation in

publication"

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EDFATYYCQQANSFPYPFGGGTKVEIKRTVAAPSVFIFPPSD"

## ORIGIN

Query Match 87.9%; Score 369; DB 9; Length 433;  
 Best Local Similarity 93.9%; Pred. No. 4.4e-112;  
 Matches 384; Conservative 0; Mismatches 25; Indels 0; Gaps 0;

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Qy      12 CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCTCAGGTTCCAGATG 71
        |||||  |||||  ||  |||||  ||  ||  |||||  |||||  |||||  |||||  |||||  |||||
Db      6  CATGGGAGTCCTAGTTCAGCTTCTGGGGCTCCTGCTGCTCTGGTTCCTCAGGTTCCAGATG 65

Qy      72 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 131
        |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||
Db      66 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 125

Qy     132 CATCACTTGTCTGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAAACC 191
        |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||
Db     126 CATCACTTGTCTGGGCGAGTCAGGGTATTAGCAGCTGGTTAGCCTGGTATCAGCAGAAAACC 185

Qy     192 AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC 251
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Db     186 AGGGAAAGCCCCCTAAGCTCCTGATCTACGCTGCATCCAGTTTGCAAAGTGGGGTCCCATC 245

Qy     252 AAGGTTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 311
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Db     246 AAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 305

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        |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||
Db     306 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAACAGTTTCCCTTACCCTTTTCGGCGG 365

Qy     372 GGGAAACCAAGCTGGAGATCAAACGAAGTGTGGCTGCACCATCTGTCTTC 420
        ||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||
Db     366 AGGGACCAAGGTGGAGATCAAACGAAGTGTGGCTGCACCATCTGTCTTC 414
  
```

# RESULT 13

AR161375

LOCUS AR161375 388 bp DNA linear PAT 17-OCT-2001

DEFINITION Sequence 358 from patent US 6255458.

ACCESSION AR161375

VERSION AR161375.1 GI:16227235

KEYWORDS

SOURCE Unknown.

ORGANISM Unknown.

Unclassified.

REFERENCE 1 (bases 1 to 388)

AUTHORS Lonberg,N. and Kay,R.M.

TITLE High affinity human antibodies and human antibodies against digoxin

JOURNAL Patent: US 6255458-A 358 03-JUL-2001;

FEATURES Location/Qualifiers

source 1..388

/organism="unknown"

/mol\_type="unassigned DNA"

## ORIGIN

Query Match 87.8%; Score 368.6; DB 6; Length 388;  
 Best Local Similarity 97.7%; Pred. No. 5.9e-112;  
 Matches 374; Conservative 0; Mismatches 9; Indels 0; Gaps 0;



Qy 72 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 131  
 |||  
 Db 66 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 125

Qy 132 CATCACTTGTCTGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 191  
 |||  
 Db 126 CATCACTTGTCTGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 185

Qy 192 AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC 251  
 |||  
 Db 186 AGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATC 245

Qy 252 AAGGTTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 311  
 |||  
 Db 246 AAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 305

Qy 312 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA 371  
 |||  
 Db 306 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGCCA 365

Qy 372 GGGAACCAAGCTGGAGATCAAAC 394  
 |||  
 Db 366 GGGGACCAAGCTGGAGATCAAAC 388

# RESULT 15

BD096602

LOCUS BD096602 388 bp DNA linear PAT 27-AUG-2002

DEFINITION Transgenic non-human animals capable of producing heterologous antibodies.

ACCESSION BD096602

VERSION BD096602.1 GI:22642190

KEYWORDS JP 2001527386-A/129.

SOURCE unidentified

ORGANISM unidentified  
 unclassified.

REFERENCE 1 (bases 1 to 388)

AUTHORS Lonberg,N. and Kay,R.M.

TITLE Transgenic non-human animals capable of producing heterologous antibodies

JOURNAL Patent: JP 2001527386-A 129 25-DEC-2001;  
 GENPHARM INTERNATIONAL

COMMENT OS Unidentified

PN JP 2001527386-A/129

PD 25-DEC-2001

PF 01-DEC-1997 JP 1998525687

PR 02-DEC-1996 US 08/758417

PI NILS LONBERG,ROBERT M KAY

PC C12N5/00,C12N5/28,C12N5/24,C12N5/10,C07K16/00,A61K39/00 CC

Strandedness: Single;

CC Topology: Linear;

CC Transgenic non-human animals capable of  
 producing heterologous

CC antibodies

FH Key Location/Qualifiers

FT source 1. 388

## ORIGIN

Qy	12	CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCAAGTTCCAGATG	71
Db	6	CATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAAGTTCCAGATG	65
Qy	72	CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC	131
Db	66	CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC	125
Qy	132	CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC	191
Db	126	CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC	185
Qy	192	AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC	251
Db	186	AGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATC	245
Qy	252	AAGGTTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC	311
Db	246	AAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC	305
Qy	312	TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA	371
Db	306	TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGCCA	365
Qy	372	GGAACCAAGCTGGAGATCAAAC	394
Db	366	GGGGACCAAGCTGGAGATCAAAC	388

Title: US-08-728-463B-220  
Perfect score: 420  
Sequence: 1 AAGCTTGCCACCATGATGGT.....TGGCTGCACCATCTGTCTTC 420



Scoring table: IDENTITY\_NUC  
Gapop 10.0 , Gapext 1.0

Searched: 4134886 seqs, 2624710521 residues

Total number of hits satisfying chosen parameters: 8269772

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

Database : N\_Geneseq\_23Sep04:\*  
1: geneseqn1980s:\*  
2: geneseqn1990s:\*  
3: geneseqn2000s:\*  
4: geneseqn2001as:\*  
5: geneseqn2001bs:\*  
6: geneseqn2002as:\*  
7: geneseqn2002bs:\*  
8: geneseqn2003as:\*  
9: geneseqn2003bs:\*  
10: geneseqn2003cs:\*  
11: geneseqn2003ds:\*  
12: geneseqn2004s:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

#### SUMMARIES

Result		%					
No.	Score	Query Match	Length	DB	ID	Description	
1	420	100.0	420	2	AAT73445	Aat73445 Human imm	
2	420	100.0	420	2	AAV39293	Aav39293 Synthetic	
3	420	100.0	420	2	AAZ22047	Aaz22047 Nucleotid	
4	420	100.0	3819	2	AAT78825	Aat78825 Kappa lig	
5	420	100.0	3819	2	AAV39266	Aav39266 Plasmid p	
6	420	100.0	3819	2	AAZ22020	Aaz22020 Nucleotid	
7	370.6	88.2	974	6	AAS99473	Aas99473 Anti-huma	
8	368.6	87.8	388	2	AAT73441	Aat73441 Human imm	
9	368.6	87.8	388	2	AAV39239	Aav39239 Functiona	
10	368.6	87.8	388	2	AAZ21993	Aaz21993 Partial n	
11	365.8	87.1	728	8	ABT31882	Abt31882 Anti-CD40	
12	365.6	87.0	711	11	ADM47072	Adm47072 Mouse ant	
13	361.6	86.1	705	10	ADE28412	Ade28412 Human ant	
14	361.6	86.1	705	10	ADE28428	Ade28428 Human ant	
15	357.8	85.2	439	2	AAT73443	Aat73443 Human imm	
16	356.2	84.8	439	2	AAZ21995	Aaz21995 Partial n	
17	352.8	84.0	409	2	AAV39241	Aav39241 Functiona	
18	346.8	82.6	401	12	ADH56388	Adh56388 Variable	
19	346.4	82.5	463	8	AAD56221	Aad56221 Human AB-	

20	346.4	82.5	6082	8	AAD56212	Aad56212 Human AB-
21	340.2	81.0	711	12	ADM32966	Adm32966 Nucleotid
22	338.6	80.6	1106	6	ABQ54241	Abq54241 Human ova
23	338.4	80.6	463	8	AAD56219	Aad56219 Human AB-
24	338.4	80.6	6082	8	AAD56211	Aad56211 Human AB-
25	337	80.2	438	4	AAH41157	Aah41157 Human cod
26	335.2	79.8	729	3	AAA11630	Aaa11630 Human imm
27	335.2	79.8	729	6	ABL46009	Abl46009 Humanised
28	333.8	79.5	981	12	ADP07904	Adp07904 Human imm
29	332.2	79.1	714	3	AAA46899	Aaa46899 DNA encod
30	332.2	79.1	714	10	AAD54350	Aad54350 Human 11.
31	330.6	78.7	490	9	ACH50647	Ach50647 Human mam
32	330.6	78.7	1066	2	AAQ49943	Aaq49943 Human ant
33	329	78.3	817	3	AAA27389	Aaa27389 Human IGF
34	326.6	77.8	591	6	ABQ56277	Abq56277 Human ova
35	325.8	77.6	871	8	ACC46532	Acc46532 Human dit
36	325.8	77.6	944	4	AAF44892	Aaf44892 Human bre
37	325.8	77.6	19035	2	AAV61794	Aav61794 Traget pl
38	324.2	77.2	698	8	ABT31880	Abt31880 Anti-CD40
39	323.2	77.0	384	2	AAT46133	Aat46133 Monoclona
40	323.2	77.0	384	2	AAT85844	Aat85844 Monoclona
41	323.2	77.0	384	10	AAL56203	Aal56203 Human C40
42	323.2	77.0	384	12	ADQ20176	Adq20176 Human sof
43	322.6	76.8	1526	12	ADN97514	Adn97514 Artificia
44	322.4	76.8	463	8	AAD56217	Aad56217 Human AB-
45	322.4	76.8	6082	8	AAD56210	Aad56210 Human AB-

#### ALIGNMENTS

##### RESULT 1

AAT73445

ID AAT73445 standard; DNA; 420 BP.

XX

AC AAT73445;

XX

DT 03-DEC-1997 (first entry)

XX

DE Human immunoglobulin light chain variable region partial transcript.

XX

KW Ig; affinity constant; human; antigen; hybridoma; B cell; transgene;

KW transgenic; mouse; CD4; antibody; autoimmune; inflammatory;

KW transplant rejection; ss.

XX

OS Homo sapiens.

XX

PN WO9713852-A1.

XX

PD 17-APR-1997.

XX

PF 10-OCT-1996; 96WO-US016433.

XX

PR 10-OCT-1995; 95US-00544404.

XX

PA (GENP-) GENPHARM INT INC.

XX



RESULT 2

AAV39293

ID AAV39293 standard; DNA; 420 BP.

XX

AC AAV39293;

XX

DT 18-DEC-1998 (first entry)

XX

DE Synthetic kappa light chain sequence LC6G5.

XX

KW Transgenic animal; human heterologous antibody; transgene;

KW isotype switching; neutrophil efflux; reperfusion injury; CD4 binding;

KW autoimmune reaction; inflammatory response; transplant rejection;

KW acid induced lung injury; acute adult respiratory distress syndrome;

KW ARDS; vasculitis; septic shock; allergic reaction; asthma;

KW cystic fibrosis; ss.

XX

OS Synthetic.

OS Homo sapiens.

XX

PN WO9824884-A1.

XX

PD 11-JUN-1998.

XX

PF 01-DEC-1997; 97WO-US021803.

XX

PR 02-DEC-1996; 96US-00758417.

XX

PA (GENP-) GENPHARM INT.

XX

PI Lonberg N, Kay RM;

XX

DR WPI; 1998-333306/29.

XX

PT Hybridoma producing antibody specific for interleukin-8 - used to prevent

PT efflux of neutrophils from vasculature, and treat reperfusion injury.

XX

PS Example 42; Page 324-325; 452pp; English.

XX

CC The present sequence represents a synthetic kappa light sequence (created

CC using oligonucleotides AAV39267-78). This synthetic sequence differs from

CC natural sequences in that strings of repeated oligonucleotides are

CC interrupted (to facilitate oligonucleotide synthesis and PCR

CC amplification), optimal translation initiation sites are incorporated and

CC HindII sites were engineered upstream of the translation initiation

CC sites. The sequence is used to make plasmid pHC6G5, which is used in the

CC construction of minigenes for expression of IgGkappa anti-CD4 antibodies,

CC in the transgenic mouse of the invention. The specification describes

CC transgenic non-human animals, especially a mouse, which are capable of

CC producing a human heterologous antibodies of multiple isotypes by

CC undergoing isotype switching. The transgenic animals have human heavy and

CC light chain transgenes. The transgenes are capable of functionally

CC rearranging a heterologous diversity (D) gene in a variable-diversity-

CC junction (V-D-J) recombination. The transgenes include a heavy chain

CC transgene comprising at least one V, D and J gene segment, and one

CC constant region gene segment. The immunoglobulin (Ig) light chain  
CC transgene comprises at least one V and J gene segment and one constant  
CC region gene segment. The gene segments are heterologous to the transgenic  
CC animal. The antibody can be used to prevent efflux of neutrophils from  
CC vasculature. It can also be used to treat reperfusion injury. CD4 binding  
CC antibodies are used to reduce undesirable autoimmune reactions,  
CC inflammatory responses and rejection of transplanted organs. The anti-IL-  
CC 8 antibodies can reduce tissue damage and prolong survival in animal  
CC models of acute adult respiratory distress syndrome (ARDS) and acid  
CC induced lung injury. The anti-IL-8 antibodies can also be used for the  
CC treatment of vasculitis, septic shock, allergic reactions (e.g. asthma)  
CC and cystic fibrosis

XX

SQ Sequence 420 BP; 98 A; 116 C; 98 G; 108 T; 0 U; 0 Other;

Query Match 100.0%; Score 420; DB 2; Length 420;  
Best Local Similarity 100.0%; Pred. No. 6.4e-122;  
Matches 420; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy      1 AAGCTTGCCACCATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCA 60
        |||
Db      1 AAGCTTGCCACCATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCA 60

Qy     61 GGTTCAGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGA 120
        |||
Db     61 GGTTCAGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGA 120

Qy    121 GACAGAGTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTAT 180
        |||
Db    121 GACAGAGTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTAT 180

Qy    181 CAGCATAAACCAGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGT 240
        |||
Db    181 CAGCATAAACCAGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGT 240

Qy    241 GGTGTCCCATCAAGGTTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGC 300
        |||
Db    241 GGTGTCCCATCAAGGTTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGC 300

Qy    301 AGCCTGCAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTAC 360
        |||
Db    301 AGCCTGCAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTAC 360

Qy    361 ACTTTTGGTCAGGGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 420
        |||
Db    361 ACTTTTGGTCAGGGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 420
```

### RESULT 3

AAZ22047

ID AAZ22047 standard; DNA; 420 BP.

XX

AC AAZ22047;

XX

DT 24-NOV-1999 (first entry)

XX

DE Nucleotide sequence of LC6G5.

XX  
 KW Transgenic animal; heterologous antibody; hybridoma; B cell;  
 KW transgenic mouse; human heavy chain transgene; digoxin;  
 KW human light chain transgene; immortalized cell; immunoglobulin;  
 KW Shinga-like toxin; autoimmune disease; cancer; infectious disease;  
 KW transplant rejection; blood disorder; coagulation disorder; ss.  
 XX  
 OS Synthetic.  
 XX  
 PN WO9945962-A1.  
 XX  
 PD 16-SEP-1999.  
 XX  
 PF 12-MAR-1999; 99WO-US005535.  
 XX  
 PR 13-MAR-1998; 98US-00042353.  
 XX  
 PA (GENP-) GENPHARM INT INC.  
 XX  
 PI Lonberg N, Fishwild DM, Ball WJ;  
 XX  
 DR WPI; 1999-551219/46.  
 XX  
 PT Novel transgenic non-human animals used to produce heterologous  
 PT antibodies.  
 XX  
 PS Example 42; Page 325-326; 484pp; English.  
 XX  
 CC The specification describes transgenic animals that are capable of  
 CC producing a heterologous antibody. The antibodies are isolated from a  
 CC hybridoma, comprising B cells, that is obtained from a transgenic mouse  
 CC having a genome comprising a human heavy chain transgene and a human  
 CC light chain transgene. The B cells are fused to immortalized cells  
 CC suitable for generating a hybridoma, which produces a detectable amount  
 CC of an immunoglobulin that specifically binds digoxin or Shinga-like  
 CC toxin. B cells from transgenic animals can be used to generate hybridomas  
 CC expressing monoclonal high affinity human sequence antibodies. Antibodies  
 CC produced from the transgenic animals of the invention can be used to  
 CC treat human diseases, e.g. autoimmune diseases, cancer, infectious  
 CC disease, transplant rejection, blood disorders such as coagulation  
 CC disorders and other diseases. The present sequence is used in the course  
 CC of the invention  
 XX  
 SQ Sequence 420 BP; 98 A; 116 C; 98 G; 108 T; 0 U; 0 Other;

Query Match 100.0%; Score 420; DB 2; Length 420;  
 Best Local Similarity 100.0%; Pred. No. 6.4e-122;  
 Matches 420; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AAGCTTGCCACCATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCA 60  
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||  
 Db 1 AAGCTTGCCACCATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCA 60  
  
 Qy 61 GGTTCAGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGA 120  
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||  
 Db 61 GGTTCAGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGA 120



CC A novel composition has been developed which comprises an immunoglobulin  
CC (Ig) having an affinity constant (Ka) of at least 2 multiply 1000000000 M  
CC -1 for binding to a predetermined human antigen. The present sequence  
CC represents the kappa light chain plasmid pLC6G5 which includes the kappa  
CC constant region and polyadenylation site. Anti- CD4 antibodies may be  
CC used in therapeutic and diagnostic applications, especially for the  
CC treatment of human diseases. These antibodies reduce activity of CD4  
CC cells and reduce undesirable autoimmune reactions, inflammatory response  
CC and transplant rejection. Transgenic animals are capable of producing  
CC heterologous antibodies of multiple isotypes by undergoing isotype  
CC switching. These animals produce a first Ig type that is necessary for  
CC antigen-stimulated B-cell maturation and can switch to encode and produce  
CC one or more subsequent heterologous isotypes

XX

SQ Sequence 3819 BP; 947 A; 1015 C; 912 G; 945 T; 0 U; 0 Other;

Query Match 100.0%; Score 420; DB 2; Length 3819;  
Best Local Similarity 100.0%; Pred. No. 1.5e-121;  
Matches 420; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy      1 AAGCTTGCCACCATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCA 60
          |||
Db    2434 AAGCTTGCCACCATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCA 2493

Qy     61 GGTTCAGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGA 120
          |||
Db    2494 GGTTCAGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGA 2553

Qy    121 GACAGAGTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTAT 180
          |||
Db    2554 GACAGAGTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTAT 2613

Qy    181 CAGCATAAACCAGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGT 240
          |||
Db    2614 CAGCATAAACCAGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGT 2673

Qy    241 GGTGTCCCATCAAGGTTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGC 300
          |||
Db    2674 GGTGTCCCATCAAGGTTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGC 2733

Qy    301 AGCCTGCAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTAC 360
          |||
Db    2734 AGCCTGCAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTAC 2793

Qy    361 ACTTTTGGTCAGGGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 420
          |||
Db    2794 ACTTTTGGTCAGGGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 2853
```

RESULT 5

AAV39266

ID AAV39266 standard; DNA; 3819 BP.

XX

AC AAV39266;

XX

DT 18-DEC-1998 (first entry)

XX



DE Plasmid pLC6G5 nucleotide sequence.

XX

KW Transgenic animal; human heterologous antibody; transgene;

KW isotype switching; neutrophil efflux; reperfusion injury; CD4 binding;

KW autoimmune reaction; inflammatory response; transplant rejection;

KW acid induced lung injury; acute adult respiratory distress syndrome;

KW ARDS; vasculitis; septic shock; allergic reaction; asthma;

KW cystic fibrosis; ss.

XX

OS Synthetic.

OS Homo sapiens.

XX

PN WO9824884-A1.

XX

PD 11-JUN-1998.

XX

PF 01-DEC-1997; 97WO-US021803.

XX

PR 02-DEC-1996; 96US-00758417.

XX

PA (GENP-) GENPHARM INT.

XX

PI Lonberg N, Kay RM;

XX

DR WPI; 1998-333306/29.

XX

PT Hybridoma producing antibody specific for interleukin-8 - used to prevent

PT efflux of neutrophils from vasculature, and treat reperfusion injury.

XX

PS Example 42; Page 317-319; 452pp; English.

XX

CC The present sequence represents a plasmid, pLC6G5, which contains a

CC synthetic kappa light chain sequence (created using oligonucleotide

CC AAV39244-65). This synthetic sequence differs from natural sequences in

CC that strings of repeated oligonucleotides are interrupted (to facilitate

CC oligonucleotide synthesis and PCR amplification), optimal translation

CC initiation sites are incorporated and HindII sites were engineered

CC upstream of the translation initiation sites. The plasmid is used in the

CC construction of minigenes for expression of IgGkappa anti-CD4 antibodies,

CC in the transgenic mouse of the invention. The specification describes

CC transgenic non-human animals, especially a mouse, which are capable of

CC producing a human heterologous antibodies of multiple isotypes by

CC undergoing isotype switching. The transgenic animals have human heavy and

CC light chain transgenes. The transgenes are capable of functionally

CC rearranging a heterologous diversity (D) gene in a variable-diversity-

CC junction (V-D-J) recombination. The transgenes include a heavy chain

CC transgene comprising at least one V, D and J gene segment, and one

CC constant region gene segment. The immunoglobulin (Ig) light chain

CC transgene comprises at least one V and J gene segment and one constant

CC region gene segment. The gene segments are heterologous to the transgenic

CC animal. The antibody can be used to prevent efflux of neutrophils from

CC vasculature. It can also be used to treat reperfusion injury. CD4 binding

CC antibodies are used to reduce undesirable autoimmune reactions,

CC inflammatory responses and rejection of transplanted organs. The anti-IL-

CC 8 antibodies can reduce tissue damage and prolong survival in animal

CC models of acute adult respiratory distress syndrome (ARDS) and acid

CC induced lung injury. The anti-IL-8 antibodies can also be used for the

CC treatment of vasculitis, septic shock, allergic reactions (e.g. asthma)  
CC and cystic fibrosis  
XX  
SQ Sequence 3819 BP; 947 A; 1015 C; 912 G; 945 T; 0 U; 0 Other;

Query Match 100.0%; Score 420; DB 2; Length 3819;  
Best Local Similarity 100.0%; Pred. No. 1.5e-121;  
Matches 420; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy      1 AAGCTTGCCACCATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCA 60
      |||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    2434 AAGCTTGCCACCATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCA 2493

Qy     61 GGTTCCAGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGA 120
      |||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    2494 GGTTCCAGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGA 2553

Qy    121 GACAGAGTCACCATCACTTGTCTGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTAT 180
      |||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    2554 GACAGAGTCACCATCACTTGTCTGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTAT 2613

Qy    181 CAGCATAAACCAGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGT 240
      |||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    2614 CAGCATAAACCAGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGT 2673

Qy    241 GGTGTCCCATCAAGGTTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGC 300
      |||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    2674 GGTGTCCCATCAAGGTTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGC 2733

Qy    301 AGCCTGCAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTAC 360
      |||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    2734 AGCCTGCAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTAC 2793

Qy    361 ACTTTTGGTCAGGGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 420
      |||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    2794 ACTTTTGGTCAGGGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 2853
```

#### RESULT 6

AAZ22020

ID AAZ22020 standard; DNA; 3819 BP.

XX

AC AAZ22020;

XX

DT 24-NOV-1999 (first entry)

XX

DE Nucleotide sequence of plasmid pLC6G5.

XX

KW Transgenic animal; heterologous antibody; hybridoma; B cell;

KW transgenic mouse; human heavy chain transgene; digoxin;

KW human light chain transgene; immortalized cell; immunoglobulin;

KW Shinga-like toxin; autoimmune disease; cancer; infectious disease;

KW transplant rejection; blood disorder; coagulation disorder; ss.

XX

OS Synthetic.

XX

PN WO9945962-A1.

XX PD 16-SEP-1999.  
XX  
XX PF 12-MAR-1999; 99WO-US005535.  
XX  
XX PR 13-MAR-1998; 98US-00042353.  
XX  
XX PA (GENP-) GENPHARM INT INC.  
XX  
XX PI Lonberg N, Fishwild DM, Ball WJ;  
XX  
XX DR WPI; 1999-551219/46.  
XX  
XX PT Novel transgenic non-human animals used to produce heterologous  
XX PT antibodies.  
XX  
XX PS Example 42; Page 318-320; 484pp; English.  
XX  
XX CC The specification describes transgenic animals that are capable of  
XX CC producing a heterologous antibody. The antibodies are isolated from a  
XX CC hybridoma, comprising B cells, that is obtained from a transgenic mouse  
XX CC having a genome comprising a human heavy chain transgene and a human  
XX CC light chain transgene. The B cells are fused to immortalized cells  
XX CC suitable for generating a hybridoma, which produces a detectable amount  
XX CC of an immunoglobulin that specifically binds digoxin or Shinga-like  
XX CC toxin. B cells from transgenic animals can be used to generate hybridomas  
XX CC expressing monoclonal high affinity human sequence antibodies. Antibodies  
XX CC produced from the transgenic animals of the invention can be used to  
XX CC treat human diseases, e.g. autoimmune diseases, cancer, infectious  
XX CC disease, transplant rejection, blood disorders such as coagulation  
XX CC disorders and other diseases. The present sequence is used in the course  
XX CC of the invention  
XX  
XX SQ Sequence 3819 BP; 947 A; 1015 C; 912 G; 945 T; 0 U; 0 Other;

[illegible]

Db 2674 GGTGTCCCATCAAGGTTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGC 2733

Qy 301 AGCCTGCAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTAC 360  
 |||

Db 2734 AGCCTGCAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTAC 2793

Qy 361 ACTTTTGGTCAGGGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 420  
 |||

Db 2794 ACTTTTGGTCAGGGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 2853

RESULT 7

AAS99473

ID AAS99473 standard; cDNA; 974 BP.

XX

AC AAS99473;

XX

DT 12-MAR-2002 (first entry)

XX

DE Anti-human AILIM monoclonal antibody clone Jmab-136, light chain cDNA.

XX

KW Human; antirheumatic; antiarthritic; antidiabetic; antipsoriatic;  
 KW antiallergic; antiulcer; neuroprotective; antithyroid; vasotropic;  
 KW immunosuppressive; dermatological; antiinflammatory; hepatotropic;  
 KW activation inducible lymphocyte immunomodulatory molecule; AILIM;  
 KW monoclonal antibody; allergy; rheumatoid arthritis; diabetes mellitus;  
 KW multiple sclerosis; autoimmune thyroiditis; psoriasis; hepatitis;  
 KW allergic contact-type dermatitis; chronic inflammatory dermatosis;  
 KW systemic lupus erythematosus; autoimmune disorder; inflammation; ss;  
 KW graft versus host reaction; immune rejection; intestinal immunity;  
 KW ulcerative colitis; pneumonia; nephritis; vasculitis; pancreatitis.

XX

OS Homo sapiens.

XX

PN WO200187981-A2.

XX

PD 22-NOV-2001.

XX

PF 15-MAY-2001; 2001WO-JP004035.

XX

PR 18-MAY-2000; 2000JP-00147116.

PR 30-MAR-2001; 2001JP-00099508.

XX

PA (NISB ) JAPAN TOBACCO INC.

XX

PI Tsuji T, Tezuka K, Hori N;

XX

DR WPI; 2002-075313/10.

DR P-PSDB; AAU74297.

XX

PT New human monoclonal antibody that binds to activation inducible  
 PT lymphocyte immunomodulatory molecule, useful for treating rheumatoid  
 PT arthritis, multiple sclerosis and inflammation.

XX

PS Claim 45; Page 267-270; 300pp; English.

XX

CC The invention relates to a novel human antibody (I), preferably a human



RESULT 8

AAT73441

ID AAT73441 standard; DNA; 388 BP.

XX

AC AAT73441;

XX

DT 03-DEC-1997 (first entry)

XX

DE Human immunoglobulin light chain variable region partial transcript.

XX

KW Ig; affinity constant; human; antigen; hybridoma; B cell; transgene;

KW transgenic; mouse; CD4; antibody; autoimmune; inflammatory;

KW transplant rejection; ss.

XX

OS Homo sapiens.

XX

PN WO9713852-A1.

XX

PD 17-APR-1997.

XX

PF 10-OCT-1996; 96WO-US016433.

XX

PR 10-OCT-1995; 95US-00544404.

XX

PA (GENP-) GENPHARM INT INC.

XX

PI Lonberg N, Kay RM;

XX

DR WPI; 1997-235888/21.

XX

PT Novel anti-CD4 antibody produced by transgenic mice - used in the

PT treatment of auto-immune disease etc.

XX

PS Claim 44; Page 255; 396pp; English.

XX

CC A novel composition has been developed which comprises an immunoglobulin  
 CC (Ig) having an affinity constant (Ka) of at least 2 multiply 1000000000 M  
 CC -1 for binding to a predetermined human antigen. The present sequence  
 CC represents a human light chain variable region partial nucleotide  
 CC sequence, 10C5 kappa, which encodes an amino acid sequence from a claimed  
 CC immunoglobulin that specifically binds human CD4. The anti-CD4 antibodies  
 CC may be used in therapeutic and diagnostic applications, especially for  
 CC the treatment of human diseases. These antibodies reduce activity of CD4  
 CC cells and reduce undesirable autoimmune reactions, inflammatory response  
 CC and transplant rejection. Transgenic animals are capable of producing  
 CC heterologous antibodies of multiple isotypes by undergoing isotype  
 CC switching. These animals produce a first Ig type that is necessary for  
 CC antigen-stimulated B-cell maturation and can switch to encode and produce  
 CC one or more subsequent heterologous isotypes

XX

SQ Sequence 388 BP; 89 A; 107 C; 97 G; 95 T; 0 U; 0 Other;

Query Match 87.8%; Score 368.6; DB 2; Length 388;

Best Local Similarity 97.7%; Pred. No. 9.9e-106;

Matches 374; Conservative 0; Mismatches 9; Indels 0; Gaps 0;



[illegible]

Lonberg N, Kay RM;

WPI; 1998-333306/29.

Hybridoma producing antibody specific for interleukin-8 - used to prevent efflux of neutrophils from vasculature, and treat reperfusion injury.

Example 41; Page 304; 452pp; English.

AAV39232-41 represent functional transcripts of a human IgGKappa anti-CD4 antibody. The sequences are isolated from 5 different transgenic mouse hybridoma cell lines. The specification describes transgenic non-human animals, especially a mouse, which are capable of producing a human heterologous antibodies of multiple isotypes by undergoing isotype switching. The transgenic animals have human heavy and light chain transgenes. The transgenes are capable of functionally rearranging a heterologous diversity (D) gene in a variable-diversity-junction (V-D-J) recombination. The transgenes include a heavy chain transgene comprising at least one V, D and J gene segment, and one constant region gene segment. The immunoglobulin (Ig) light chain transgene comprises at least one V and J gene segment and one constant region gene segment. The gene segments are heterologous to the transgenic animal. The antibody can be used to prevent efflux of neutrophils from vasculature. It can also be used to treat reperfusion injury. CD4 binding antibodies are used to reduce undesirable autoimmune reactions, inflammatory responses and rejection of transplanted organs. The anti-IL-8 antibodies can reduce tissue damage and prolong survival in animal models of acute adult respiratory distress syndrome (ARDS) and acid induced lung injury. The anti-IL-8 antibodies can also be used for the treatment of vasculitis, septic shock, allergic reactions (e.g. asthma) and cystic fibrosis

Sequence 388 BP; 89 A; 107 C; 97 G; 95 T; 0 U; 0 Other;

Query Match 87.8%; Score 368.6; DB 2; Length 388;  
Best Local Similarity 97.7%; Pred. No. 9.9e-106;  
Matches 374; Conservative 0; Mismatches 9; Indels 0; Gaps 0;

Qy 12 CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCAAGTTCCAGATG 71  
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  
Db 6 CATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAAGTTCCAGATG 65

Qy 72 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 131  
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  
Db 66 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 125

Qy 132 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGGTATCAGCATAAACC 191  
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  
Db 126 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGGTATCAGCATAAACC 185

Qy 192 AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC 251  
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  
Db 186 AGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATC 245



[illegible]

AAZ21993

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KW

KW

OS

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XX Producing methylotroph yeast that expresses mammalian sugar chains by  
PT disrupting the OCH1 gene and inserting an alpha-1,2-mannosidase gene.  
XX  
PS Example 28; SEQ ID NO 91; 247pp; Japanese.  
XX  
CC The invention relates to the production of a methylotroph yeast that  
CC produces mammalian sugar chains, comprising disrupting the OCH1 gene in  
CC the yeast that encodes for alpha-1,6-mannosyl transferase and inserting  
CC and expressing the alpha-1,2-mannosidase gene. The specification also  
CC includes DNA sequences encoding: (a) orotidin-5'-phosphate decarboxylase  
CC (URA3); (b) phosphoribosyl-amino-imidazole succinocarboxamide synthase  
CC (ADE1); (c) imidazole-glycerol-phosphate dehydratase (HIS3); (d) 3-  
CC isopropyl malate dehydrogenase (LEU2); (e) alpha-1,6-mannosyl transferase  
CC (OCH1); (f) proteinase A (PEP4); (g) proteinase B (PRB1); and (h)  
CC aspartic protease (YPS1), mannosyl transferase (KTR1 or MNN9), alcohol  
CC oxidase (AOX) and glyceraldehyde 3-phosphate dehydrogenase (GAPDH) gene  
CC sequences. The yeast is used for the production of human and mammalian  
CC high mannose glycoproteins with high yield and purity. The method is also  
CC useful for producing hybrid or complex sugar chains containing mammalian  
CC type chains. This sequence represents the gene encoding a mouse anti-  
CC human G-CSF antibody light chain used in the invention.  
XX  
SQ Sequence 711 BP; 176 A; 203 C; 182 G; 150 T; 0 U; 0 Other;

RESULT 13

ADE28412

ID ADE28412 standard; cDNA; 705 BP.

XX

AC ADE28412;

XX

DT 29-JAN-2004 (first entry)

XX

DE Human anti-CD40 antibody 10-8-3 variable region light chain cDNA.

XX

KW anti-CD40 monoclonal antibody; CD40; cytostatic; virucide; antibacterial;

KW immunostimulant; anti-HIV; hyperproliferative; cancer; viral;

KW bacterial infection; immunodeficiency; neutropenia; HIV; gene therapy;

KW human; variable region light chain; ss; gene; 10-8-3.

XX

OS Homo sapiens.

XX

PN WO2003040170-A2.

XX

PD 15-MAY-2003.

XX

PF 08-NOV-2002; 2002WO-US036107.

XX

PR 09-NOV-2001; 2001US-0348980P.

XX

PA (PFIZ ) PFIZER PROD INC.

PA (ABGE-) ABGENIX INC.

XX

PI Bedian V, Gladue RP, Corvalan J, Jia X, Feng X;

XX

DR WPI; 2003-441521/41.

DR P-PSDB; ADE28413.

XX

PT New chimeric or human monoclonal antibody or its antigen-binding portion  
PT that specifically binds to and activates human CD40, useful for enhancing  
PT an immune response in a human, or treating cancer, HIV, neutropenia or  
PT viral infections.

XX

PS Claim 24; SEQ ID NO 19; 177pp; English.

XX

CC The invention relates to a novel chimeric or human monoclonal antibody or  
CC its antigen-binding portion that specifically binds to and activates  
CC human CD40. The anti-CD40 antibody of the invention demonstrates  
CC cytostatic, virucide, antibacterial, immunostimulant and anti-HIV  
CC activities and may be useful for treating a hyperproliferative disorder  
CC such as cancer, viral and bacterial infection or genetic, primary or  
CC combined immunodeficiency conditions including neutropenia or HIV  
CC infection. The anti-CD40 antibodies may also be useful for detecting CD40  
CC in a biological sample in vitro or in vivo, as well as during gene  
CC therapy procedures. The current sequence is that of the human anti-CD40  
CC antibody variable region light chain cDNA of the invention.

XX

SQ Sequence 705 BP; 172 A; 201 C; 179 G; 153 T; 0 U; 0 Other;

Query Match 86.1%; Score 361.6; DB 10; Length 705;

Best Local Similarity 92.9%; Pred. No. 2e-103;

Matches 379; Conservative 0; Mismatches 29; Indels 0; Gaps 0;

[illegible]

RESULT 14

ADE28428

ID ADE28428 standard; cDNA; 705 BP.

XX

AC ADE28428;

XX

DT 29-JAN-2004 (first entry) .

XX

DE Human anti-CD40 antibody 21-2-1 variable region light chain cDNA.

XX

KW anti-CD40 monoclonal antibody; CD40; cytostatic; virucide; antibacterial;  
KW immunostimulant; anti-HIV; hyperproliferative; cancer; viral;  
KW bacterial infection; immunodeficiency; neutropenia; HIV; gene therapy;  
KW human; variable region light chain; ss; gene; 21-2-1.

XX

OS Homo sapiens.

XX

PN WO2003040170-A2.

XX.

PD 15-MAY-2003.

XX

PF 08-NOV-2002; 2002WO-US036107.

XX

PR 09-NOV-2001; 2001US-0348980P.

XX

PA (PFIZ ) PFIZER PROD INC.

PA (ABGE-) ABGENIX INC.  
 XX  
 PI Bedian V, Gladue RP, Corvalan J, Jia X, Feng X;  
 XX  
 DR WPI; 2003-441521/41.  
 DR P-PSDB; ADE28429.  
 XX  
 PT New chimeric or human monoclonal antibody or its antigen-binding portion  
 PT that specifically binds to and activates human CD40, useful for enhancing  
 PT an immune response in a human, or treating cancer, HIV, neutropenia or  
 PT viral infections.  
 XX  
 PS Claim 24; SEQ ID NO 35; 177pp; English.  
 XX  
 CC The invention relates to a novel chimeric or human monoclonal antibody or  
 CC its antigen-binding portion that specifically binds to and activates  
 CC human CD40. The anti-CD40 antibody of the invention demonstrates  
 CC cytostatic, virucide, antibacterial, immunostimulant and anti-HIV  
 CC activities and may be useful for treating a hyperproliferative disorder  
 CC such as cancer, viral and bacterial infection or genetic, primary or  
 CC combined immunodeficiency conditions including neutropenia or HIV  
 CC infection. The anti-CD40 antibodies may also be useful for detecting CD40  
 CC in a biological sample in vitro or in vivo, as well as during gene  
 CC therapy procedures. The current sequence is that of the human anti-CD40  
 CC antibody variable region light chain cDNA of the invention.  
 XX  
 SQ Sequence 705 BP; 177 A; 200 C; 175 G; 153 T; 0 U; 0 Other;

Query Match 86.1%; Score 361.6; DB 10; Length 705;  
 Best Local Similarity 92.9%; Pred. No. 2e-103;  
 Matches 379; Conservative 0; Mismatches 29; Indels 0; Gaps 0;

Qy 13 ATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATGC 72  
 |||| | |||| ||||||||| || |||||||||||||||||||||||||||||  
 Db 1 ATGAGGCTCCCTGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATGC 60  
 Qy 73 GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCACC 132  
 |||||||||||||||||||||||||||||||||||||||||||||||||||||  
 Db 61 GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCACC 120  
 Qy 133 ATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACCA 192  
 |||||||||||||||||| |||| |||||||||||||||||||||  
 Db 121 ATCACTTGTCGGGCGAGTCAGGGTATTTACAGCTGGTTAGCCTGGTATCAGCAGAAACCA 180  
 Qy 193 GGTAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATCA 252  
 || ||||| ||||| ||||||||||||| ||||||||| ||| |||||||||  
 Db 181 GGGAAAGCCCCTAACCTCCTGATCTATACTGCATCCACTTTACAAAGTGGGGTCCCATCA 240  
 Qy 253 AGGTTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCCT 312  
 ||||||||| ||||||||||||||||||||||||||||||||||||| |||  
 Db 241 AGGTTTCAGCGGCACTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAACCT 300  
 Qy 313 GAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCAG 372  
 ||||||||||||||||||||||||||||| ||||||| ||||| |||  
 Db 301 GAAGATTTTGCAACTTACTATTGTCAACAGGCTAATATTTCCCGCTCACTTTGGGCGGA 360  
 Qy 373 GGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 420



Db

361 GGGACCAAGGTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 408

RESULT 15

AAT73443

ID AAT73443 standard; DNA; 439 BP.

XX

AC AAT73443;

XX

DT 03-DEC-1997 (first entry)

XX

DE Human immunoglobulin light chain variable region partial transcript.

XX

KW Ig; affinity constant; human; antigen; hybridoma; B cell; transgene;

KW transgenic; mouse; CD4; antibody; autoimmune; inflammatory;

KW transplant rejection; ss.

XX

OS Homo sapiens.

XX

PN WO9713852-A1.

XX

PD 17-APR-1997.

XX

PF 10-CCT-1996; 96WO-US016433.

XX

PR 10-OCT-1995; 95US-00544404.

XX

PA (GENP-) GENPHARM INT INC.

XX

PI Lonberg N, Kay RM;

XX

DR WPI; 1997-235888/21.

XX

PT Novel anti-CD4 antibody produced by transgenic mice - used in the

PT treatment of auto-immune disease etc.

XX

PS Claim 44; Page 256; 396pp; English.

XX

CC A novel composition has been developed which comprises an immunoglobulin  
CC (Ig) having an affinity constant (Ka) of at least 2 multiply 1000000000 M  
CC -1 for binding to a predetermined human antigen. The present sequence  
CC represents a human light chain variable region partial nucleotide  
CC sequence, 4D1 kappa, which encodes an amino acid sequence from a claimed  
CC immunoglobulin that specifically binds human CD4. The anti-CD4 antibodies  
CC may be used in therapeutic and diagnostic applications, especially for  
CC the treatment of human diseases. These antibodies reduce activity of CD4  
CC cells and reduce undesirable autoimmune reactions, inflammatory response  
CC and transplant rejection. Transgenic animals are capable of producing  
CC heterologous antibodies of multiple isotypes by undergoing isotype  
CC switching. These animals produce a first Ig type that is necessary for  
CC antigen-stimulated B-cell maturation and can switch to encode and produce  
CC one or more subsequent heterologous isotypes

XX

SQ Sequence 439 BP; 100 A; 122 C; 106 G; 111 T; 0 U; 0 Other;

Query Match

85.2%; Score 357.8; DB 2; Length 439;

Best Local Similarity 92.2%; Pred. No. 2.6e-102;  
Matches 377; Conservative 0; Mismatches 32; Indels 0; Gaps 0;

```
Qy      12 CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTCCCAGGTCCAGATG 71
      ||| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db      6 CATGGAGTTCCCCGTTTCAGCTCCTGGGGCTCCTGCTGCTCTGTTTCCCAGGTGCCAGATG 65

Qy     72 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 131
      ||| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db     66 TGACATCCAGATGACCCAGTCTCCATCCTCACTGTCTGCATCTGTAGGAGACAGAGTCAC 125

Qy    132 CATCACTTGTTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 191
      ||| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db    126 CATCACTTGTTCGGGCGAGTCAGGGTATTAGCAGCTGGTTAGCCTGGTATCAGCAGAAACC 185

Qy    192 AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC 251
      || | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db    186 AGAGAAAGCCCCTAAGTCCCTGATCTATTCTGCATCCAGTTTGCAAAGTGGGGTCCCATC 245

Qy    252 AAGGTTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 311
      ||| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db    246 AAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 305

Qy    312 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA 371
      ||| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db    306 TGAAGATTTTGCAACTTATTACTGCCAACAGTATGATAGTTACCCGTACACTTTTGGCCA 365

Qy    372 GGGAAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 420
      ||| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Db    366 GGGGACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 414
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Job time : 326.197 secs

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OM nucleic - nucleic search, using sw model

Run on: December 2, 2004, 12:19:03 ; Search time 61.3429 Seconds  
(without alignments)  
4866.596 Million cell updates/sec

Title: US-08-728-463B-220  
Perfect score: 420  
Sequence: 1 AAGCTTGCCACCATGATGGT.....TGGCTGCACCATCTGTCTTC 420

Scoring table: IDENTITY\_NUC  
Gapop 10.0 , Gapext 1.0

Searched: 824507 seqs, 355394441 residues

Total number of hits satisfying chosen parameters: 1649014

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

Database : Issued\_Patents\_NA:\*  
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6: /cgn2\_6/ptodata/1/ina/backfiles1.seq:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

#### SUMMARIES

Result No.	Score	% Match	Query Length	ID	Description	
1	420	100.0	420	3	US-09-042-353-420	Sequence 420, App
2	420	100.0	420	3	US-08-758-417A-220	Sequence 220, App
3	420	100.0	3819	3	US-09-042-353-393	Sequence 393, App
4	420	100.0	3819	3	US-08-758-417A-243	Sequence 243, App
5	368.6	87.8	388	3	US-09-042-353-358	Sequence 358, App
6	368.6	87.8	388	3	US-08-758-417A-206	Sequence 206, App
7	357.8	85.2	439	3	US-09-042-353-360	Sequence 360, App
8	357.8	85.2	439	3	US-08-758-417A-208	Sequence 208, App
9	332.2	79.1	714	4	US-09-472-087-62	Sequence 62, Appl
10	330.6	78.7	1066	1	US-08-157-101A-4	Sequence 4, Appli
11	325.8	77.6	19040	4	US-09-343-485A-3	Sequence 3, Appli
12	323.2	77.0	384	1	US-08-259-372A-13	Sequence 13, Appl
13	323.2	77.0	384	1	US-08-468-671-13	Sequence 13, Appl
14	319.4	76.0	390	2	US-08-646-367-2	Sequence 2, Appli
15	308.8	73.5	705	1	US-08-488-376-16	Sequence 16, Appl
16	308.8	73.5	705	2	US-08-634-223-16	Sequence 16, Appl
17	308.8	73.5	705	2	US-08-634-224-16	Sequence 16, Appl
18	308.8	73.5	705	2	US-08-634-400-16	Sequence 16, Appl
19	308.8	73.5	705	2	US-08-635-878-16	Sequence 16, Appl
20	308.8	73.5	705	2	US-08-770-057-16	Sequence 16, Appl
21	308.8	73.5	705	3	US-09-335-697B-16	Sequence 16, Appl
22	308.8	73.5	705	4	US-09-335-697B-16	Sequence 16, Appl
23	308.8	73.5	705	4	US-09-740-002-16	Sequence 16, Appl
24	302	71.9	387	3	US-08-803-085-3	Sequence 3, Appli
25	295	70.2	990	4	US-09-800-729-79	Sequence 79, Appl
26	294	70.0	387	1	US-08-217-918-1	Sequence 1, Appli
27	282.6	67.3	708	1	US-08-488-376-18	Sequence 18, Appl
28	282.6	67.3	708	2	US-08-634-223-18	Sequence 18, Appl
29	282.6	67.3	708	2	US-08-634-224-18	Sequence 18, Appl
30	282.6	67.3	708	2	US-08-634-400-18	Sequence 18, Appl
31	282.6	67.3	708	2	US-08-635-878-18	Sequence 18, Appl
32	282.6	67.3	708	2	US-08-770-057-18	Sequence 18, Appl
33	282.6	67.3	708	3	US-09-335-697B-18	Sequence 18, Appl
34	282.6	67.3	708	4	US-09-335-697B-18	Sequence 18, Appl

35	282.6	67.3	708	4	US-09-740-002-18	Sequence 18, Appl
36	280.8	66.9	642	1	US-08-157-101A-8	Sequence 8, Appli
37	279.4	66.5	941	4	US-09-800-729-81	Sequence 81, Appl
c 38	276.6	65.9	371	4	US-09-389-681-187	Sequence 187, App
c 39	276.6	65.9	371	4	US-09-620-405B-187	Sequence 187, App
c 40	276.6	65.9	371	4	US-09-339-338-187	Sequence 187, App
c 41	276.6	65.9	371	4	US-09-433-826B-187	Sequence 187, App
c 42	276.6	65.9	371	4	US-09-604-287A-187	Sequence 187, App
c 43	276.6	65.9	371	4	US-09-834-759-187	Sequence 187, App
c 44	276.6	65.9	371	4	US-09-590-751A-187	Sequence 187, App
45	273.8	65.2	411	4	US-09-582-337-23	Sequence 23, Appl

#### ALIGNMENTS

#### RESULT 1

US-09-042-353-420

; Sequence 420, Application US/09042353

; Patent No. 6255458

; GENERAL INFORMATION:

; APPLICANT: Lonberg, Nils

; APPLICANT: Kay, Robert M.

; TITLE OF INVENTION: Transgenic No. 6255458-Human Animals for

; TITLE OF INVENTION: Producing Heterologous Antibodies

; NUMBER OF SEQUENCES: 421

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Townsend and Townsend and Crew LLP

; STREET: Two Embarcadero Center, Eighth Floor

; CITY: San Francisco

; STATE: California

; COUNTRY: USA

; ZIP: 94111-3834

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.30

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/09/042,353

; FILING DATE: 13-MAR-1998

; CLASSIFICATION: 800

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/810,279

; FILING DATE: 17-DEC-1991

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/853,408

; FILING DATE: 18-MAR-1992

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/904,068

; FILING DATE: 23-JUN-1992

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/990,860

; FILING DATE: 16-DEC-1992

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/053,131

; FILING DATE: 26-APR-1993

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; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/096,762
; FILING DATE: 22-JUL-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/155,301
; FILING DATE: 18-NOV-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/161,739
; FILING DATE: 03-DEC-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/165,699
; FILING DATE: 10-DEC-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/209,741
; FILING DATE: 09-MAR-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/352,322
; FILING DATE: 07-DEC-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/544,404
; FILING DATE: 10-OCT-1995
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/728,463
; FILING DATE: 10-OCT-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: WO PCT/US96/16433
; FILING DATE: 10-OCT-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/758,417
; FILING DATE: 02-DEC-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: WO PCT/US97/21803
; FILING DATE: 01-DEC-1997
; ATTORNEY/AGENT INFORMATION:
; NAME: Apple, Randolph T.
; REGISTRATION NUMBER: 36,429
; REFERENCE/DOCKET NUMBER: 014643-009040US
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (415) 576-0200
; TELEFAX: (415) 576-0300
; INFORMATION FOR SEQ ID NO: 420:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 420 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: DNA
US-09-042-353-420

```

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Query Match: 100.0%; Score 420; DB 3; Length 420;
Best Local Similarity 100.0%; Pred. No. 1.7e-123;
Matches 420; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy      1 AAGCTTGCCACCATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCA 60
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Db      1 AAGCTTGCCACCATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCA 60

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Qy	61	GGTTCCAGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGA	120
Db	61	GGTTCCAGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGA	120
Qy	121	GACAGAGTCACCATCACTTGTCTGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTAT	180
Db	121	GACAGAGTCACCATCACTTGTCTGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTAT	180
Qy	181	CAGCATAAACCAGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGT	240
Db	181	CAGCATAAACCAGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGT	240
Qy	241	GGTGTCCCATCAAGGTTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGC	300
Db	241	GGTGTCCCATCAAGGTTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGC	300
Qy	301	AGCCTGCAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTAC	360
Db	301	AGCCTGCAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTAC	360
Qy	361	ACTTTTGGTCAGGGAACCAAGCTGGAGATCAAACGAAGTGTGGCTGCACCATCTGTCTTC	420
Db	361	ACTTTTGGTCAGGGAACCAAGCTGGAGATCAAACGAAGTGTGGCTGCACCATCTGTCTTC	420

RESULT 2

US-08-758-417A-220

; Sequence 220, Application US/08758417A

; Patent No. 6300129

; GENERAL INFORMATION:

; APPLICANT: Lonberg, Nils

; Kay, Robert M.

; TITLE OF INVENTION: Transgenic No. 6300129-Human Animals for  
; Producing Heterologous Antibodies

; NUMBER OF SEQUENCES: 417

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Townsend and Townsend and Crew LLP

; STREET: Two Embarcadero Center, Eighth Floor

; CITY: San Francisco

; STATE: California

; COUNTRY: USA

; ZIP: 94111-3834

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.30

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/08/758,417A

; FILING DATE: 02-Dec-1996

; CLASSIFICATION: <Unknown>

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/728,463

; FILING DATE: 10-OCT-1996

; APPLICATION NUMBER: US 08/544,404

; FILING DATE: 10-OCT-1995

; APPLICATION NUMBER: US 08/352,322

```

; FILING DATE: 07-DEC-1994
; APPLICATION NUMBER: US 08/209,741
; FILING DATE: 09-MAR-1994
; APPLICATION NUMBER: US 08/165,699
; FILING DATE: 10-DEC-1993
; APPLICATION NUMBER: US 08/161,739
; FILING DATE: 03-DEC-1993
; APPLICATION NUMBER: US 08/155,301
; FILING DATE: 18-NOV-1993
; APPLICATION NUMBER: US 08/096,762
; FILING DATE: 22-JUL-1993
; APPLICATION NUMBER: US 08/053,131
; FILING DATE: 26-APR-1993
; APPLICATION NUMBER: US 07/990,860
; FILING DATE: 16-DEC-1992
; ATTORNEY/AGENT INFORMATION:
; NAME: Serafini, Andrew T.
; REGISTRATION NUMBER: 41,303
; REFERENCE/DOCKET NUMBER: 014643-009030US
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (415) 576-0200
; TELEFAX: (415) 576-0300
; INFORMATION FOR SEQ ID NO: 220:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 420 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: DNA
; SEQUENCE DESCRIPTION: SEQ ID NO: 220:
US-08-758-417A-220

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Query Match          100.0%;  Score 420;  DB 3;  Length 420;
Best Local Similarity 100.0%;  Pred. No. 1.7e-123;
Matches 420;  Conservative 0;  Mismatches 0;  Indels 0;  Gaps 0;

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Qy      1 AAGCTTGCCACCATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCA 60
        |||
Db      1 AAGCTTGCCACCATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCA 60

Qy     61 GGTTCAGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGA 120
        |||
Db     61 GGTTCAGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGA 120

Qy    121 GACAGAGTCACCATCACTTGTCTGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTAT 180
        |||
Db    121 GACAGAGTCACCATCACTTGTCTGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTAT 180

Qy    181 CAGCATAAACCAGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGT 240
        |||
Db    181 CAGCATAAACCAGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGT 240

Qy    241 GGTGTCCCATCAAGGTTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGC 300
        |||
Db    241 GGTGTCCCATCAAGGTTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGC 300

Qy    301 AGCCTGCAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTAC 360

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Db      301 AGCCTGCAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTAC 360
Qy      361 ACTTTTGGTCAGGGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 420
Db      361 ACTTTTGGTCAGGGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 420

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RESULT 3

US-09-042-353-393

; Sequence 393, Application US/09042353

; Patent No. 6255458

; GENERAL INFORMATION:

; APPLICANT: Lonberg, Nils

; APPLICANT: Kay, Robert M.

; TITLE OF INVENTION: Transgenic No. 6255458-Human Animals for

; TITLE OF INVENTION: Producing Heterologous Antibodies

; NUMBER OF SEQUENCES: 421

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Townsend and Townsend and Crew LLP

; STREET: Two Embarcadero Center, Eighth Floor

; CITY: San Francisco

; STATE: California

; COUNTRY: USA

; ZIP: 94111-3834

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.30

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/09/042,353

; FILING DATE: 13-MAR-1998

; CLASSIFICATION: 800

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/810,279

; FILING DATE: 17-DEC-1991

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/853,408

; FILING DATE: 18-MAR-1992

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/904,068

; FILING DATE: 23-JUN-1992

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/990,860

; FILING DATE: 16-DEC-1992

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/053,131

; FILING DATE: 26-APR-1993

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/096,762

; FILING DATE: 22-JUL-1993

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/155,301

; FILING DATE: 18-NOV-1993

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/161,739



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; FILING DATE: 03-DEC-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/165,699
; FILING DATE: 10-DEC-1993
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/209,741
; FILING DATE: 09-MAR-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/352,322
; FILING DATE: 07-DEC-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/544,404
; FILING DATE: 10-OCT-1995
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/728,463
; FILING DATE: 10-OCT-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: WO PCT/US96/16433
; FILING DATE: 10-OCT-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/758,417
; FILING DATE: 02-DEC-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: WO PCT/US97/21803
; FILING DATE: 01-DEC-1997
; ATTORNEY/AGENT INFORMATION:
; NAME: Apple, Randolph T.
; REGISTRATION NUMBER: 36,429
; REFERENCE/DOCKET NUMBER: 014643-009040US
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (415) 576-0200
; TELEFAX: (415) 576-0300
; INFORMATION FOR SEQ ID NO: 393:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 3819 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: DNA
US-09-042-353-393

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Query Match          100.0%; Score 420; DB 3; Length 3819;
Best Local Similarity 100.0%; Pred. No. 3.9e-123;
Matches 420; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy      1 AAGCTTGCCACCATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCA 60
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      2434 AAGCTTGCCACCATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCA 2493

Qy      61 GGTTCCAGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGA 120
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      2494 GGTTCCAGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGA 2553

Qy      121 GACAGAGTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTAT 180
        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      2554 GACAGAGTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTAT 2613

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Qy 181 CAGCATAAACCAGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGT 240  
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||  
 Db 2614 CAGCATAAACCAGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGT 2673  
 Qy 241 GGTGTCCCATCAAGGTTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGC 300  
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||  
 Db 2674 GGTGTCCCATCAAGGTTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGC 2733  
 Qy 301 AGCCTGCAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTAC 360  
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||  
 Db 2734 AGCCTGCAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTAC 2793  
 Qy 361 ACTTTTGGTCAGGGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 420  
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||  
 Db 2794 ACTTTTGGTCAGGGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 2853

RESULT 4

US-08-758-417A-243

; Sequence 243, Application US/08758417A

; Patent No. 6300129

; GENERAL INFORMATION:

; APPLICANT: Lonberg, Nils

; Kay, Robert M.

; TITLE OF INVENTION: Transgenic No. 6300129-Human Animals for

; Producing Heterologous Antibodies

; NUMBER OF SEQUENCES: 417

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Townsend and Townsend and Crew LLP

; STREET: Two Embarcadero Center, Eighth Floor

; CITY: San Francisco

; STATE: California

; COUNTRY: USA

; ZIP: 94111-3834

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.30

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/08/758,417A

; FILING DATE: 02-Dec-1996

; CLASSIFICATION: <Unknown>

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/728,463

; FILING DATE: 10-OCT-1996

; APPLICATION NUMBER: US 08/544,404

; FILING DATE: 10-OCT-1995

; APPLICATION NUMBER: US 08/352,322

; FILING DATE: 07-DEC-1994

; APPLICATION NUMBER: US 08/209,741

; FILING DATE: 09-MAR-1994

; APPLICATION NUMBER: US 08/165,699

; FILING DATE: 10-DEC-1993

; APPLICATION NUMBER: US 08/161,739

; FILING DATE: 03-DEC-1993

; APPLICATION NUMBER: US 08/155,301

```

; FILING DATE: 18-NOV-1993
; APPLICATION NUMBER: US 08/096,762
; FILING DATE: 22-JUL-1993
; APPLICATION NUMBER: US 08/053,131
; FILING DATE: 26-APR-1993
; APPLICATION NUMBER: US 07/990,860
; FILING DATE: 16-DEC-1992
; ATTORNEY/AGENT INFORMATION:
; NAME: Serafini, Andrew T.
; REGISTRATION NUMBER: 41,303
; REFERENCE/DOCKET NUMBER: 014643-009030US
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (415) 576-0200
; TELEFAX: (415) 576-0300
; INFORMATION FOR SEQ ID NO: 243:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 3819 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: DNA
; SEQUENCE DESCRIPTION: SEQ ID NO: 243:
US-08-758-417A-243

```

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Query Match          100.0%; Score 420; DB 3; Length 3819;
Best Local Similarity 100.0%; Pred. No. 3.9e-123;
Matches 420; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy      1 AAGCTTGCCACCATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCA 60
      ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      2434 AAGCTTGCCACCATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCA 2493

Qy      61 GGTTCCAGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGA 120
      ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      2494 GGTTCCAGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGA 2553

Qy      121 GACAGAGTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTAT 180
      ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      2554 GACAGAGTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTAT 2613

Qy      181 CAGCATAAACCAGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGT 240
      ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      2614 CAGCATAAACCAGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGT 2673

Qy      241 GGTGTCCCATCAAGGTTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGC 300
      ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      2674 GGTGTCCCATCAAGGTTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGC 2733

Qy      301 AGCCTGCAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTAC 360
      ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      2734 AGCCTGCAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTAC 2793

Qy      361 ACTTTTGGTCAGGGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 420
      ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      2794 ACTTTTGGTCAGGGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 2853

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RESULT 5

US-09-042-353-358

; Sequence 358, Application US/09042353

; Patent No. 6255458

; GENERAL INFORMATION:

; APPLICANT: Lonberg, Nils

; APPLICANT: Kay, Robert M.

; TITLE OF INVENTION: Transgenic No. 6255458-Human Animals for

; TITLE OF INVENTION: Producing Heterologous Antibodies

; NUMBER OF SEQUENCES: 421

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Townsend and Townsend and Crew LLP

; STREET: Two Embarcadero Center, Eighth Floor

; CITY: San Francisco

; STATE: California

; COUNTRY: USA

; ZIP: 94111-3834

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.30

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/09/042,353

; FILING DATE: 13-MAR-1998

; CLASSIFICATION: 800

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/810,279

; FILING DATE: 17-DEC-1991

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/853,408

; FILING DATE: 18-MAR-1992

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/904,068

; FILING DATE: 23-JUN-1992

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/990,860

; FILING DATE: 16-DEC-1992

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/053,131

; FILING DATE: 26-APR-1993

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/096,762

; FILING DATE: 22-JUL-1993

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/155,301

; FILING DATE: 18-NOV-1993

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/161,739

; FILING DATE: 03-DEC-1993

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/165,699

; FILING DATE: 10-DEC-1993

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/209,741

; FILING DATE: 09-MAR-1994

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/352,322  
 ; FILING DATE: 07-DEC-1994  
 ; PRIOR APPLICATION DATA:  
 ; APPLICATION NUMBER: US 08/544,404  
 ; FILING DATE: 10-OCT-1995  
 ; PRIOR APPLICATION DATA:  
 ; APPLICATION NUMBER: US 08/728,463  
 ; FILING DATE: 10-OCT-1996  
 ; PRIOR APPLICATION DATA:  
 ; APPLICATION NUMBER: WO PCT/US96/16433  
 ; FILING DATE: 10-OCT-1996  
 ; PRIOR APPLICATION DATA:  
 ; APPLICATION NUMBER: US 08/758,417  
 ; FILING DATE: 02-DEC-1996  
 ; PRIOR APPLICATION DATA:  
 ; APPLICATION NUMBER: WO PCT/US97/21803  
 ; FILING DATE: 01-DEC-1997  
 ; ATTORNEY/AGENT INFORMATION:  
 ; NAME: Apple, Randolph T.  
 ; REGISTRATION NUMBER: 36,429  
 ; REFERENCE/DOCKET NUMBER: 014643-009040US  
 ; TELECOMMUNICATION INFORMATION:  
 ; TELEPHONE: (415) 576-0200  
 ; TELEFAX: (415) 576-0300  
 ; INFORMATION FOR SEQ ID NO: 358:  
 ; SEQUENCE CHARACTERISTICS:  
 ; LENGTH: 388 base pairs  
 ; TYPE: nucleic acid  
 ; STRANDEDNESS: single  
 ; TOPOLOGY: linear  
 ; MOLECULE TYPE: DNA  
 US-09-042-353-358

Query Match 87.8%; Score 368.6; DB 3; Length 388;  
 Best Local Similarity 97.7%; Pred. No. 3.1e-107;  
 Matches 374; Conservative 0; Mismatches 9; Indels 0; Gaps 0;

Qy	12	CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG	71
Db	6	CATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG	65
Qy	72	CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC	131
Db	66	CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC	125
Qy	132	CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC	191
Db	126	CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC	185
Qy	192	AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC	251
Db	186	AGGGAAAGCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATC	245
Qy	252	AAGGTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC	311
Db	246	AAGGTTCAGCGGAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC	305

Qy            312 TGAAGATTTTGCACCTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA 371  
             |||||  
Db            306 TGAAGATTTTGCACCTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGCCA 365

Qy            372 GGGAACCAAGCTGGAGATCAAAC 394  
             ||| |  
Db            366 GGGGACCAAGCTGGAGATCAAAC 388

## RESULT 6

US-08-758-417A-206

; Sequence 206, Application US/08758417A

; Patent No. 6300129

## ; GENERAL INFORMATION:

APPLICANT: Lonberg, Nils

;

Kay, Robert M.

TITLE OF INVENTION: Transgenic No. 6300129-Human Animals for  
Producing Heterologous Antibodies

; NUMBER OF SEQUENCES: 417

## CORRESPONDENCE ADDRESS:

ADDRESSEE: Townsend and Townsend and Crew LLP

STREET: Two Embarcadero Center, Eighth Floor

CITY: San Francisco

```

; STATE: California

```

COUNTRY: USA

; ZIP: 94111-3834

COMPUTER READABLE FORM:

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; MEDIUM TYPE: Floppy disk

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COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

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; SOFTWARE: PatentIn Release #1.0, Version #1.30

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CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/758,417A

FILING DATE: 02-Dec-1996

CLASSIFICATION: <Unknown>

;  
PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 08/728,463

FILING DATE: 10-OCT-1996

APPLICATION NUMBER: US 08/544,404

FILING DATE: 10-OCT-1995

APPLICATION NUMBER: US 08/352,322

FILING DATE: 07-DEC-1994

APPLICATION NUMBER: US 08/209,741

FILING DATE: 09-MAR-1994

APPLICATION NUMBER: US 08/165,699

FILING DATE: 10-DEC-1993

APPLICATION NUMBER: US 08/161,739

: FILING DATE: 03-DEC-1993

APPLICATION NUMBER: US 08/155,301

FILING DATE: 18-NOV-1993

APPLICATION NUMBER: US 08/096,762

FILING DATE: 22-JUL-1993

APPLICATION NUMBER: US 08/053,131

FILING DATE: 26-APR-1993

APPLICATION NUMBER: US 07/990,860

FILING DATE: 16-DEC-1992

ATTORNEY/AGENT INFORMATION:

```

;      NAME: Serafini, Andrew T.
;      REGISTRATION NUMBER: 41,303
;      REFERENCE/DOCKET NUMBER: 014643-009030US
;      TELECOMMUNICATION INFORMATION:
;      TELEPHONE: (415) 576-0200
;      TELEFAX: (415) 576-0300
;      INFORMATION FOR SEQ ID NO: 206:
;      SEQUENCE CHARACTERISTICS:
;      LENGTH: 388 base pairs
;      TYPE: nucleic acid
;      STRANDEDNESS: single
;      TOPOLOGY: linear
;      MOLECULE TYPE: DNA
;      SEQUENCE DESCRIPTION: SEQ ID NO: 206:
US-08-758-417A-206

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Query Match 87.8%; Score 368.6; DB 3; Length 388;  
Best Local Similarity 97.7%; Pred. No. 3.1e-107;  
Matches 374; Conservative 0; Mismatches 9; Indels 0; Gaps 0;

Qy	12	CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGTGCTCTGGTTCCCAAGTTCCAGATG	71
Db	6	CATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAAGTTCCAGATG	65
Qy	72	CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC	131
Db	66	CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC	125
Qy	132	CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC	191
Db	126	CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC	185
Qy	192	AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC	251
Db	186	AGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATC	245
Qy	252	AAGGTTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC	311
Db	246	AAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC	305
Qy	312	TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA	371
Db	306	TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGCCA	365
Qy	372	GGAACCAAGCTGGAGATCAAAC	394
Db	366	GGGGACCAAGCTGGAGATCAAAC	388

## RESULT 7

US-09-042-353-360

; Sequence 360, Application US/09042353

Patent No. 6255458

: GENERAL INFORMATION:

APPLICANT: Lonberg, Nils

APPLICANT: Kay, Robert M.

TITLE OF INVENTION: Transgenic No. 6255458-Human Animals for

; TITLE OF INVENTION: Producing Heterologous Antibodies

; NUMBER OF SEQUENCES: 421

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Townsend and Townsend and Crew LLP

; STREET: Two Embarcadero Center, Eighth Floor

; CITY: San Francisco

; STATE: California

; COUNTRY: USA

; ZIP: 94111-3834

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.30

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/09/042,353

; FILING DATE: 13-MAR-1998

; CLASSIFICATION: 800

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/810,279

; FILING DATE: 17-DEC-1991

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/853,408

; FILING DATE: 18-MAR-1992

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/904,068

; FILING DATE: 23-JUN-1992

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/990,860

; FILING DATE: 16-DEC-1992

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/053,131

; FILING DATE: 26-APR-1993

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/096,762

; FILING DATE: 22-JUL-1993

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/155,301

; FILING DATE: 18-NOV-1993

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/161,739

; FILING DATE: 03-DEC-1993

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/165,699

; FILING DATE: 10-DEC-1993

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/209,741

; FILING DATE: 09-MAR-1994

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/352,322

; FILING DATE: 07-DEC-1994

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/544,404

; FILING DATE: 10-OCT-1995

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/728,463

; FILING DATE: 10-OCT-1996



```

; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: WO PCT/US96/16433
; FILING DATE: 10-OCT-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/758,417
; FILING DATE: 02-DEC-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: WO PCT/US97/21803
; FILING DATE: 01-DEC-1997
; ATTORNEY/AGENT INFORMATION:
; NAME: Apple, Randolph T.
; REGISTRATION NUMBER: 36,429
; REFERENCE/DOCKET NUMBER: 014643-009040US
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (415) 576-0200
; TELEFAX: (415) 576-0300
; INFORMATION FOR SEQ ID NO: 360:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 439 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: DNA
US-09-042-353-360

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Query Match          85.2%; Score 357.8; DB 3; Length 439;
Best Local Similarity 92.2%; Pred. No. 8.7e-104;
Matches 377; Conservative 0; Mismatches 32; Indels 0; Gaps 0;

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Qy      12 CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 71
      |||| | |||| | ||||||| || ||||||| ||||||| |||||||
Db      6 CATGGAGTTCCCCGTTTCAGCTCCTGGGGCTCCTGCTGCTCTGTTTCCCAGGTGCCAGATG 65

Qy      72 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 131
      ||||||| ||||||| ||||||| || || ||||||| ||||||| |||||||
Db      66 TGACATCCAGATGACCCAGTCTCCATCCTCACTGTCTGCATCTGTAGGAGACAGAGTCAC 125

Qy      132 CATCACTTGTCTGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 191
      ||||||| ||||||| ||||||| || ||||||| ||||||| |||||||
Db      126 CATCACTTGTCTGGGCGAGTCAGGGTATTAGCAGCTGGTTAGCCTGGTATCAGCAGAAACC 185

Qy      192 AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC 251
      || |||||| |||||| ||||||| ||||||| ||||||| |||||||
Db      186 AGAGAAAGCCCCTAAGTCCCTGATCTATTCTGCATCCAGTTTGCAAAGTGGGGTCCCATC 245

Qy      252 AAGGTTTCAGCGGAAGTGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 311
      ||||||| ||||||| ||||||| ||||||| ||||||| |||||||
Db      246 AAGGTTTCAGCGGCAGTGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 305

Qy      312 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA 371
      ||||||| || || || |||| | ||||| ||||||| |||||
Db      306 TGAAGATTTTGCAACTTATTACTGCCAACAGTATGATAGTTACCCGTACACTTTTGGCCA 365

Qy      372 GGGAAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 420
      ||| ||||||| ||||||| ||||||| ||||||| |||||||
Db      366 GGGGACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 414

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RESULT 8

US-08-758-417A-208

; Sequence 208, Application US/08758417A

; Patent No. 6300129

; GENERAL INFORMATION:

; APPLICANT: Lonberg, Nils

; Kay, Robert M.

; TITLE OF INVENTION: Transgenic No. 6300129-Human Animals for  
; Producing Heterologous Antibodies

; NUMBER OF SEQUENCES: 417

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Townsend and Townsend and Crew LLP

; STREET: Two Embarcadero Center, Eighth Floor

; CITY: San Francisco

; STATE: California

; COUNTRY: USA

; ZIP: 94111-3834

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.30

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/08/758,417A

; FILING DATE: 02-Dec-1996

; CLASSIFICATION: <Unknown>

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/728,463

; FILING DATE: 10-OCT-1996

; APPLICATION NUMBER: US 08/544,404

; FILING DATE: 10-OCT-1995

; APPLICATION NUMBER: US 08/352,322

; FILING DATE: 07-DEC-1994

; APPLICATION NUMBER: US 08/209,741

; FILING DATE: 09-MAR-1994

; APPLICATION NUMBER: US 08/165,699

; FILING DATE: 10-DEC-1993

; APPLICATION NUMBER: US 08/161,739

; FILING DATE: 03-DEC-1993

; APPLICATION NUMBER: US 08/155,301

; FILING DATE: 18-NOV-1993

; APPLICATION NUMBER: US 08/096,762

; FILING DATE: 22-JUL-1993

; APPLICATION NUMBER: US 08/053,131

; FILING DATE: 26-APR-1993

; APPLICATION NUMBER: US 07/990,860

; FILING DATE: 16-DEC-1992

; ATTORNEY/AGENT INFORMATION:

; NAME: Serafini, Andrew T.

; REGISTRATION NUMBER: 41,303

; REFERENCE/DOCKET NUMBER: 014643-009030US

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: (415) 576-0200

; TELEFAX: (415) 576-0300

; INFORMATION FOR SEQ ID NO: 208:

; SEQUENCE CHARACTERISTICS:

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;          LENGTH: 439 base pairs
;          TYPE: nucleic acid
;          STRANDEDNESS: single
;          TOPOLOGY: linear
;          MOLECULE TYPE: DNA
;          SEQUENCE DESCRIPTION: SEQ ID NO: 208:
US-08-758-417A-208

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Query Match          85.2%;   Score 357.8;   DB 3;   Length 439;
Best Local Similarity 92.2%;   Pred. No. 8.7e-104;
Matches 377;   Conservative 0;   Mismatches 32;   Indels 0;   Gaps 0;

```

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Qy      12 CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 71
      |||| | |||| | |||||||| || |||||||||||| |||||||| ||||||
Db      6 CATGGAGTTCCCCGTTCCAGCTCCTGGGGCTCCTGCTGCTCTGTTTCCCAGGTGCCAGATG 65

Qy      72 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 131
      |||||||||||||||||||| || |||||||||||||||||||| ||||||
Db      66 TGACATCCAGATGACCCAGTCTCCATCCTCACTGTCTGCATCTGTAGGAGACAGAGTCAC 125

Qy     132 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 191
      |||||||||||||||||||| |||||||||||||||||||| ||||||
Db     126 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAGAAACC 185

Qy     192 AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC 251
      || |||| |||| |||| |||| |||| |||| |||| |||| ||||
Db     186 AGAGAAAGCCCCTAAGTCCCTGATCTATTCTGCATCCAGTTTGCAAAGTGGGGTCCCATC 245

Qy     252 AAGGTTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 311
      |||||||||||| |||||||||||||||||||||||| ||||||||||||
Db     246 AAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 305

Qy     312 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA 371
      |||||||||||||| || || |||| || |||| |||| |||| |||| ||
Db     306 TGAAGATTTTGCAACTTATTACTGCCAACAGTATGATAGTTACCCGTACACTTTTGGCCA 365

Qy     372 GGGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 420
      ||| ||||||||||||||||||||||||||||||||||||
Db     366 GGGGACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 414

```

# RESULT 9

US-09-472-087-62

; Sequence 62, Application US/09472087

; Patent No. 6682736

## GENERAL INFORMATION:

; APPLICANT: HANSON, DOUGLAS C.

; APPLICANT: NEVEU, MARK J.

; APPLICANT: MUELLER, EILLEN E.

; APPLICANT: HANKE, JEFFREY H.

; APPLICANT: GILMAN, STEVEN C.

; APPLICANT: DAVIS, C. GEOFFREY

; APPLICANT: CORVALAN, JOSE R.

; TITLE OF INVENTION: HUMAN MONOCLONAL ANTIBODIES TO CTLA-4

; FILE REFERENCE: ABX-PF1

; CURRENT APPLICATION NUMBER: US/09/472,087

; CURRENT FILING DATE: 1999-12-23

; PRIOR APPLICATION NUMBER: 60/113,647  
; PRIOR FILING DATE: 1998-12-23  
; NUMBER OF SEQ ID NOS: 147  
; SOFTWARE: PatentIn Ver. 2.1  
; SEQ ID NO 62  
; LENGTH: 714  
; TYPE: DNA  
; ORGANISM: Homo sapiens  
US-09-472-087-62

Query Match 79.1%; Score 332.2; DB 4; Length 714;  
Best Local Similarity 88.3%; Pred. No. 1.4e-95;  
Matches 361; Conservative 0; Mismatches 48; Indels 0; Gaps 0;

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Qy      12 CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCAGGTTCAGATG 71
        ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db      6 CATGAGGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTACTCTGGCTCCGAGGTGCCAGATG 65

Qy      72 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 131
        ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db      66 TGACATCCAGATGACCCAGTCTCCATCCTCCTGTCTGCATCTGTAGGAGACAGAGTCAC 125

Qy     132 CATCACTTGTCTGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 191
        ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db     126 CATCACTTGCCGGGCAAGTCAGAGCATTAACAGCTATTTAGATTGGTATCAGCAGAAACC 185

Qy     192 AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC 251
        ||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db     186 AGGGAAAGCCCCTAAACTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATC 245

Qy     252 AAGGTTACGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 311
        ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db     246 AAGGTTACAGTGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGTCTGCAACC 305

Qy     312 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA 371
        ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db     306 TGAAGATTTTGCAACTTACTACTGTCAACAGTATTACAGTACTCCATTCACTTTCGGCCC 365

Qy     372 GGGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 420
        || ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db     366 TGGGACCAAAGTGGAATCAAACGAACTGTGGCTGCACCATCTGTCTTC 414
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RESULT 10

US-08-157-101A-4

; Sequence 4, Application US/08157101A  
; Patent No. 5808032

; GENERAL INFORMATION:

; APPLICANT: KURIHARA, TATSUYA  
; APPLICANT: MATSUKURA, SHIGEKAZU  
; APPLICANT: TSURUOKA, NOBUO  
; APPLICANT: ARIMA, KENJI  
; APPLICANT: NISHIHARA, TATSURO  
; TITLE OF INVENTION: ANTI-HBs ANTIBODY GENES AND EXPRESSION  
; TITLE OF INVENTION: PLASMIDS THEREFOR  
; NUMBER OF SEQUENCES: 9  
; CORRESPONDENCE ADDRESS:



Db 338 TGAAGATTTTGCAACTTATTACTGTCTACATCATAATAATTACCGCTAAGTTTCGGCGG 397  
 Qy 372 GGGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 420  
 Db 398 AGGGACCAAGGTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 446

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Query Match          77.6%;   Score 325.8;   DB 4;   Length 19040;
Best Local Similarity 87.3%;   Pred. No. 5.2e-93;
Matches 357;   Conservative    0;   Mismatches 52;   Indels    0;   Gaps    0;

Qy          12  CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG  71
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Db          7550 CATGAGGGTCCCCGCTCAGCTCCTGGGGCTCCTTCTGCTCTGGCTCCCAGGTGCCAGATG  7609

Qy          72  CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC  131
              |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||
Db          7610 TGACATCCAGATGACCCAGTCTCCATCTTCCCTGTCTGCATCTGTAGGGGACAGAGTCAC  7669

Qy          132 CATCACTTGTCTGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC  191
              |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||
Db          7670 CATCACTTGCAGGGCAAGTCAGGACATTAGGTATTATTTAAATTGGTATCAGCAGAAACC  7729

Qy          192 AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC  251
              |||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||
Db          7730 AGGAAAAGCTCCTAAGCTCCTGATCTATGTTGCATCCAGTTTGCAAAGTGGGGTCCCATC  7789

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Qy 252 AAGGTTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 311  
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 Db 7790 AAGGTTTCAGCGGCAGTGGATCTGGGACAGAGTTCACTCTCACCGTCAGCAGCCTGCAGCC 7849  
 Qy 312 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA 371  
 |||||  
 Db 7850 TGAAGATTTTGCGACTTATTACTGTCTACAGGTTTATAGTACCCCTCGGACGTTTCGGCCA 7909  
 Qy 372 GGGAAACCAAGCTGGAGATCAAACGAAGTGTGGCTGCACCATCTGTCTTC 420  
 |||||  
 Db 7910 AGGGACCAAGGTGGAAATCAAACGTACGGTGGCTGCACCATCTGTCTTC 7958

RESULT 12

US-08-259-372A-13

; Sequence 13, Application US/08259372A

; Patent No. 5565354

; GENERAL INFORMATION:

; APPLICANT: Ostberg, Lars G.

; TITLE OF INVENTION: PRODUCTION OF HUMAN MONOCLONAL

; TITLE OF INVENTION: ANTIBODIES SPECIFIC FOR HEPATITIS B SURFACE ANTIGEN

; NUMBER OF SEQUENCES: 16

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Townsend and Townsend and Crew LLP

; STREET: Two Embarcadero Center, Eighth Floor

; CITY: San Francisco

; STATE: CA

; COUNTRY: USA

; ZIP: 94111-3834

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.30

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/08/259,372A

; FILING DATE: 14-JUN-1994

; CLASSIFICATION: 424

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/871,426

; FILING DATE: 21-APR-1992

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/676,036

; FILING DATE: 27-MAR-1991

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/538,796

; FILING DATE: 15-JUN-1990

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/192,754

; FILING DATE: 11-MAY-1988

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 06/925,196

; FILING DATE: 31-OCT-1986

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 06/904,517

; FILING DATE: 05-SEP-1986

; ATTORNEY/AGENT INFORMATION:

```

; NAME: Smith, William M.
; REGISTRATION NUMBER: 30,223
; REFERENCE/DOCKET NUMBER: 11823-50-7
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (415) 326-2400
; TELEFAX: (415) 576-0300
; INFORMATION FOR SEQ ID NO: 13:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 384 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: unknown
; TOPOLOGY: unknown
; MOLECULE TYPE: cDNA
; HYPOTHETICAL: NO
; ANTI-SENSE: NO
; ORIGINAL SOURCE:
; ORGANISM: Homo sapiens
; CELL TYPE: Hybridoma
; CELL LINE: ZM1-2
; FEATURE:
; NAME/KEY: CDS
; LOCATION: 1..384
US-08-259-372A-13

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Query Match          77.0%; Score 323.2; DB 1; Length 384;
Best Local Similarity 90.1%; Pred. No. 7.6e-93;
Matches 346; Conservative 0; Mismatches 38; Indels 0; Gaps 0;

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Qy      13 ATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATGC 72
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Db      1 ATGAGGCCCGTCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATGC 60

Qy      73 GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCACC 132
      ||||||||||||||||||||||||||||||||||||||| |||||||||
Db      61 GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTGGGAGACAGAGTCACC 120

Qy     133 ATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACCA 192
      ||||||||||||||||||| ||||||| ||||||||||||||||| |||||
Db     121 GTCACCTTGTCGGGCGAGTCAGGGTATTAGCAGTTGGTTAGCCTGGTATCAGCAGAAACCA 180

Qy     193 GGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATCA 252
      || ||||| ||||| ||||||| ||||||| ||||||| |||||||
Db     181 GGGAAAGCCCCTAAACTCCTGATCCATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATCA 240

Qy     253 AGGTTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCCT 312
      ||||||| ||| ||||||||||||||||||||||||||||| ||||| ||
Db     241 AGGTTTCATCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCACCAGCCTGCAGGCT 300

Qy     313 GAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCAG 372
      ||||||| ||||| ||||||||||||||||| | ||| |||| | ||||| ||
Db     301 GAAGATTTTGCAACCTACTATTGTCAACAGGCTGACAGTCTCCCTTTTACTTTTCGGCGGA 360

Qy     373 GGAACCAAGCTGGAGATCAAACGA 396
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Db     361 GGGACCAAGGTGGACTTCAAACGA 384

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RESULT 13

US-08-468-671-13

; Sequence 13, Application US/08468671

; Patent No. 5648077

; GENERAL INFORMATION:

; APPLICANT: Ostberg, Lars G.

; TITLE OF INVENTION: PRODUCTION OF HUMAN MONOCLONAL

; TITLE OF INVENTION: ANTIBODIES SPECIFIC FOR HEPATITIS B SURFACE ANTIGEN

; NUMBER OF SEQUENCES: 16

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Townsend and Townsend and Crew LLP

; STREET: Two Embarcadero Center, Eighth Floor

; CITY: San Francisco

; STATE: CA

; COUNTRY: USA

; ZIP: 94111-3834

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.30

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/08/468,671

; FILING DATE: 06-JUN-1995

; CLASSIFICATION: 424

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 08/259,372

; FILING DATE: 14-JUN-1994

; APPLICATION NUMBER: US 07/871,426

; FILING DATE: 21-APR-1992

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/676,036

; FILING DATE: 27-MAR-1991

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/538,796

; FILING DATE: 15-JUN-1990

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 07/192,754

; FILING DATE: 11-MAY-1988

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 06/925,196

; FILING DATE: 31-OCT-1986

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: US 06/904,517

; FILING DATE: 05-SEP-1986

; ATTORNEY/AGENT INFORMATION:

; NAME: Smith, William M.

; REGISTRATION NUMBER: 30,223

; REFERENCE/DOCKET NUMBER: 11823-50-7

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: (415) 326-2400

; TELEFAX: (415) 576-0300

; INFORMATION FOR SEQ ID NO: 13:

; SEQUENCE CHARACTERISTICS:

; LENGTH: 384 base pairs

; TYPE: nucleic acid

; STRANDEDNESS: unknown

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;     TOPOLOGY:  unknown
;     MOLECULE TYPE:  cDNA
;     HYPOTHETICAL:  NO
;     ANTI-SENSE:  NO
;     ORIGINAL SOURCE:
;     ORGANISM:  Homo sapiens
;     CELL TYPE:  Hybridoma
;     CELL LINE:  ZM1-2
;     FEATURE:
;     NAME/KEY:  CDS
;     LOCATION:  1..384
US-08-468-671-13

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Query Match          77.0%;  Score 323.2;  DB 1;  Length 384;
Best Local Similarity 90.1%;  Pred. No. 7.6e-93;
Matches 346;  Conservative 0;  Mismatches 38;  Indels 0;  Gaps 0;

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Qy      13  ATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATGC 72
      |||| | | ||||||||| || |||||||||||||||||||||||||||||
Db      1  ATGAGGCCCGTCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATGC 60

Qy      73  GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCACC 132
      ||||||||||||||||||||||||||||||||||||||| |||||||||||||
Db      61  GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTGGGAGACAGAGTCACC 120

Qy     133  ATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACCA 192
      ||||||||||||||||||| ||||||| ||||||| ||||||| |||||||
Db     121  GTCACCTTGTCGGGCGAGTCAGGGTATTAGCAGTTGGTTAGCCTGGTATCAGCAGAAACCA 180

Qy     193  GGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATCA 252
      || ||||| ||||| ||||||||| ||||||||| ||||||||| |||||||||
Db     181  GGGAAAGCCCCCTAAACTCCTGATCCATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATCA 240

Qy     253  AGGTTACAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCCT 312
      ||||||| ||| ||||||||||||||||||||||||||||||| ||||||||| ||
Db     241  AGGTTATCATCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCACCAGCCTGCAGGCT 300

Qy     313  GAAGATTTTGCAAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCAG 372
      ||||||||||||| ||||||||||||||||| || ||||| || ||||| ||
Db     301  GAAGATTTTGCAAACTTACTATTGTCAACAGGCTGACAGTCTCCCTTTTACTTTTCGGCGGA 360

Qy     373  GGAACCAAGCTGGAGATCAAACGA 396
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Db     361  GGGACCAAGGTGGACTTCAAACGA 384

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#### RESULT 14

US-08-646-367-2

; Sequence 2, Application US/08646367

; Patent No. 5959085

#### ; GENERAL INFORMATION:

; APPLICANT: Pierre Garrone

; APPLICANT: Odile Djossou

; APPLICANT: Francois Fossiez

; APPLICANT: Jacques Banchemereau

; TITLE OF INVENTION: Human Monoclonal Antibodies

; TITLE OF INVENTION: Against Human Cytokines And

```

; TITLE OF INVENTION:  Methods Of Making And Using Such Antibodies
; NUMBER OF SEQUENCES:  30
; CORRESPONDENCE ADDRESS:
;   ADDRESSEE:  Schering-Plough Corporation
;   STREET:  2000 Galloping Hill Road
;   CITY:  Kenilworth
;   STATE:  New Jersey
;   COUNTRY:  USA
;   ZIP:  07033
; COMPUTER READABLE FORM:
;   MEDIUM TYPE:  Floppy disk
;   COMPUTER:  Apple Macintosh
;   OPERATING SYSTEM:  Macintosh 7.5.3
;   SOFTWARE:  Microsoft Word 5.1a
; CURRENT APPLICATION DATA:
;   APPLICATION NUMBER:  US/08/646,367
;   FILING DATE:  May 16, 1996
;   CLASSIFICATION:  530
; ATTORNEY/AGENT INFORMATION:
;   NAME:  Foulke, Cynthia L.
;   REGISTRATION NUMBER:  32,364
;   REFERENCE/DOCKET NUMBER:  SF0403K
; TELECOMMUNICATION INFORMATION:
;   TELEPHONE:  908-298-2987
;   TELEFAX:  908-298-5388
; INFORMATION FOR SEQ ID NO:  2:
;   SEQUENCE CHARACTERISTICS:
;   LENGTH:  390 base pairs
;   TYPE:  nucleic acid
;   STRANDEDNESS:  double
;   TOPOLOGY:  linear
US-08-646-367-2

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Query Match          76.0%;  Score 319.4;  DB 2;  Length 390;
Best Local Similarity 89.4%;  Pred. No. 1.2e-91;
Matches 344;  Conservative 0;  Mismatches 41;  Indels 0;  Gaps 0;

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Qy      12 CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 71
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Qy      72 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 131
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Db      66 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 125

Qy      132 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 191
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Db      126 CATCACTTGTCGGGCGAGTCAGGGTATTAGCAGTTGGTTAGCCTGGTATCAGCAGAAACC 185

Qy      192 AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC 251
        ||| || || || ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db      186 AGGAAAGGCCCGAAGCTCTTGATCTATGAAGCATCCAATTTGGAAACTGGGGTCCCATC 245

Qy      252 AAGGTTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 311
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Db      246 AAGATTTCAGCGGCAGTGGATCTGGGTGAGATTTCAACCTCACCATCAGCAGCCTGCAGCC 305

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Qy 312 TGAAGATTTTGGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA 371  
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 Db 306 TGAAGATTTTGGCAACTTATTATTGTCAACAGACTAGCAGTTTCTCCTCAGTTTCGGCGG 365  
 Qy 372 GGGAACCAAGCTGGAGATCAAACGA 396  
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 Db 366 CGGGACCAAGGTGGAGCACAAACGA 390

RESULT 15

US-08-488-376-16

; Sequence 16, Application US/08488376

; Patent No. 5811524

; GENERAL INFORMATION:

; APPLICANT: BRAMS, Peter

; APPLICANT: CHAMAT, Soulaïma Salim

; APPLICANT: PAN, Li-Zhen

; APPLICANT: WALSH, Edward E.

; APPLICANT: HEARD, Cheryl Janne

; APPLICANT: NEWMAN, Roland Anthony

; TITLE OF INVENTION: NEUTRALIZING HIGH AFFINITY HUMAN

; TITLE OF INVENTION: MONOCLONAL ANTIBODIES SPECIFIC TO RSV F-PROTEIN AND

; TITLE OF INVENTION: METHODS FOR THEIR MANUFACTURE AND THERAPEUTIC USE

THEREOF

; NUMBER OF SEQUENCES: 19

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Burns, Doane, Swecker & Mathis

; STREET: P.O. Box 1404

; CITY: Alexandria

; STATE: Virginia

; COUNTRY: United States

; ZIP: 22313-1404

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: PatentIn Release #1.0, Version #1.30

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/08/488,376

; FILING DATE: 07-JUN-1995

; CLASSIFICATION: 424

; ATTORNEY/AGENT INFORMATION:

; NAME: Teskin, Robin L.

; REGISTRATION NUMBER: 35,030

; REFERENCE/DOCKET NUMBER: 012712-150

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: (703) 836-6620

; TELEFAX: (703) 836-2021

; INFORMATION FOR SEQ ID NO: 16:

; SEQUENCE CHARACTERISTICS:

; LENGTH: 705 base pairs

; TYPE: nucleic acid

; STRANDEDNESS: single

; TOPOLOGY: linear

; MOLECULE TYPE: DNA (genomic)

; FEATURE:

; NAME/KEY: CDS

; LOCATION: 1..705  
US-08-488-376-16

Query Match 73.5%; Score 308.8; DB 1; Length 705;  
Best Local Similarity 84.8%; Pred. No. 3.5e-88;  
Matches 346; Conservative 0; Mismatches 62; Indels 0; Gaps 0;

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Db      1 ATGGAGACCCCTGCTCAGCTCCTGGGGCTCCTGCTACTCTGGCTCCGAGGTGCCAGATGT 60

Qy      73 GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCACC 132
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Db      61 GACATCCAGATGACCCAGTCTCCATCCTCCCTGTCTGCATCTGTCTGGAGACAGAGTCACC 120

Qy     133 ATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACCA 192
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Db     121 ATCACTTGCCGGGCGAGTCAGAGGATTGCTAGTTATTTAAATTGGTATCAGCACAAACCA 180

Qy     193 GGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATCA 252
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Db     181 GGGAAAGCCCCTAAGCTCCTGATATATGCTGGATCCAATTTGCACCGTGGGGTCCCGTCA 240

Qy     253 AGGTTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCCT 312
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Db     241 AGGTTTCAGTGGCGGTGGATCTGGGACAGATTTCACTCTCACCATCAACAGTCTGCAACCT 300

Qy     313 GAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCAG 372
      ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db     301 GAAGATTTTGCAACTTACTATTGTCAACAGGCTTACAGTACCCCTGGACTTTCGGCCCA 360

Qy     373 GGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 420
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Job time : 62.3429 secs

GenCore version 5.1.6  
Copyright (c) 1993 - 2004 Compugen Ltd.

OM nucleic - nucleic search, using sw model

Run on: December 2, 2004, 17:01:26 ; Search time 322.011 Seconds  
(without alignments)  
7166.911 Million cell updates/sec

Title: US-08-728-463B-220  
Perfect score: 420  
Sequence: 1 AAGCTTGCCACCATGATGGT.....TGGCTGCACCATCTGTCTTC 420

Scoring table: IDENTITY\_NUC  
Gapop 10.0 , Gapext 1.0

Searched: 3694831 seqs, 2747406616 residues

Total number of hits satisfying chosen parameters: 7389662

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

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- 2: /cgn2\_6/ptodata/1/pubpna/PCT\_NEW\_PUB.seq:\*
- 3: /cgn2\_6/ptodata/1/pubpna/US06\_NEW\_PUB.seq:\*
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- 9: /cgn2\_6/ptodata/1/pubpna/US09A\_PUBCOMB.seq:\*
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- 11: /cgn2\_6/ptodata/1/pubpna/US09C\_PUBCOMB.seq:\*
- 12: /cgn2\_6/ptodata/1/pubpna/US09\_NEW\_PUB.seq:\*
- 13: /cgn2\_6/ptodata/1/pubpna/US10A\_PUBCOMB.seq:\*
- 14: /cgn2\_6/ptodata/1/pubpna/US10B\_PUBCOMB.seq:\*
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- 16: /cgn2\_6/ptodata/1/pubpna/US10D\_PUBCOMB.seq:\*
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- 20: /cgn2\_6/ptodata/1/pubpna/US60\_NEW\_PUB.seq:\*
- 21: /cgn2\_6/ptodata/1/pubpna/US60\_PUBCOMB.seq:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

#### SUMMARIES

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	1	370.6	88.2	974	9	US-09-859-053-29		Sequence 29, Appl
	2	370.6	88.2	974	17	US-10-625-105-29		Sequence 29, Appl
	3	365.8	87.1	728	9	US-09-844-684-15		Sequence 15, Appl
	4	365.8	87.1	728	14	US-10-040-244-15		Sequence 15, Appl
	5	365.8	87.1	728	17	US-10-693-629-65		Sequence 65, Appl
	6	362.6	86.3	716	9	US-09-844-684-13		Sequence 13, Appl
	7	362.6	86.3	716	14	US-10-040-244-13		Sequence 13, Appl
	8	361.6	86.1	705	15	US-10-292-088-23		Sequence 23, Appl
	9	361.6	86.1	705	15	US-10-292-088-47		Sequence 47, Appl
	10	361.6	86.1	752	17	US-10-684-109-83		Sequence 83, Appl
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	12	346.4	82.5	463	16	US-10-395-894-24		Sequence 24, Appl
	13	346.4	82.5	463	17	US-10-695-667-24		Sequence 24, Appl
	14	346.4	82.5	6082	16	US-10-395-894-10		Sequence 10, Appl
	15	346.4	82.5	6082	17	US-10-695-667-10		Sequence 10, Appl

	16	344	81.9	702	17	US-10-684-109-107	Sequence 107, App
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	18	342.4	81.5	702	17	US-10-684-109-89	Sequence 89, Appl
c	19	342.4	81.5	702	17	US-10-684-109-90	Sequence 90, Appl
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	21	338.4	80.6	463	16	US-10-395-894-20	Sequence 20, Appl
	22	338.4	80.6	463	17	US-10-695-667-20	Sequence 20, Appl
	23	338.4	80.6	6082	16	US-10-395-894-9	Sequence 9, Appli
	24	338.4	80.6	6082	17	US-10-695-667-9	Sequence 9, Appli
	25	336	80.0	702	17	US-10-684-109-101	Sequence 101, App
c	26	336	80.0	702	17	US-10-684-109-102	Sequence 102, App
	27	335.2	79.8	729	15	US-10-216-484-125	Sequence 125, App
	28	335.2	79.8	729	15	US-10-384-933-125	Sequence 125, App
	29	334.4	79.6	702	17	US-10-684-109-113	Sequence 113, App
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	31	332.8	79.2	702	17	US-10-684-109-95	Sequence 95, Appl
c	32	332.8	79.2	702	17	US-10-684-109-96	Sequence 96, Appl
	33	332.2	79.1	714	14	US-10-153-382-18	Sequence 18, Appl
	34	332.2	79.1	714	18	US-10-612-497-62	Sequence 62, Appl
	35	332.2	79.1	714	18	US-10-776-649-62	Sequence 62, Appl
	36	330.6	78.7	490	10	US-09-918-995-37859	Sequence 37859, A
	37	328	78.1	381	16	US-10-309-762-111	Sequence 111, App
	38	326.6	77.8	591	16	US-10-264-049-2157	Sequence 2157, Ap
	39	325.8	77.6	19040	17	US-10-817-950-3	Sequence 3, Appli
	40	324.2	77.2	514	14	US-10-066-543-2025	Sequence 2025, Ap
c	41	324.2	77.2	537	14	US-10-066-543-186	Sequence 186, App
	42	324.2	77.2	698	9	US-09-844-684-11	Sequence 11, Appl
	43	324.2	77.2	698	14	US-10-040-244-11	Sequence 11, Appl
	44	324.2	77.2	698	17	US-10-693-629-61	Sequence 61, Appl
	45	323.2	77.0	384	15	US-10-389-221-10	Sequence 10, Appl

#### ALIGNMENTS

##### RESULT 1

US-09-859-053-29

; Sequence 29, Application US/09859053

; Patent No. US20020102658A1

; GENERAL INFORMATION:

; APPLICANT: Tsuji, Takashi

; APPLICANT: Tezuka, Katsunari

; APPLICANT: Hori, No. US20020102658A1uaki

; TITLE OF INVENTION: HUMAN MONOCLONAL ANTIBODY AGAINST A

; TITLE OF INVENTION: COSTIMULATORY SIGNAL TRANSDUCTION MOLECULE AILIM AND

; TITLE OF INVENTION: PHARMACEUTICAL USE THEREOF

; FILE REFERENCE: 06501-079001

; CURRENT APPLICATION NUMBER: US/09/859,053

; CURRENT FILING DATE: 2001-05-16

; PRIOR APPLICATION NUMBER: JP 2001-99508

; PRIOR FILING DATE: 2001-03-30

; PRIOR APPLICATION NUMBER: JP 2000-147116

; PRIOR FILING DATE: 2000-05-18

; NUMBER OF SEQ ID NOS: 43

; SOFTWARE: FastSEQ for Windows Version 4.0

; SEQ ID NO 29

; LENGTH: 974

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; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: 5'UTR
; LOCATION: (1)...(38)
; NAME/KEY: CDS
; LOCATION: (39)...(746)
; NAME/KEY: 3'UTR
; LOCATION: (750)...(974)
; NAME/KEY: sig_peptide
; LOCATION: (39)...(104)
US-09-859-053-29

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Query Match          88.2%; Score 370.6; DB 9; Length 974;
Best Local Similarity 94.1%; Pred. No. 2e-108;
Matches 385; Conservative 0; Mismatches 24; Indels 0; Gaps 0;

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Qy      12 CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 71
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Db      44 CATGAGGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 103

Qy      72 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 131
      ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db      104 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 163

Qy     132 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 191
      ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db     164 CATCACTTGTCGGGCGAGTCAGGGTATTAGCAGGTTGTTAGCCTGGTATCAGCAGAAACC 223

Qy     192 AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC 251
      ||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db     224 AGGGAAAGCCCCCTAAACTCCTGATCTATGTTGCATCCAGTTTGCAAAGTGGGGTCCCATC 283

Qy     252 AAGGTTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 311
      ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db     284 AAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 343

Qy     312 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA 371
      ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db     344 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAACAGTTTCCCGTGGACGTTTCGGCCA 403

Qy     372 GGGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 420
      || ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db     404 AGGGACCAAGGTGGAAATCAAACGAACTGTGGCTGCACCATCTGTCTTC 452

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## RESULT 2

US-10-625-105-29

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; Sequence 29, Application US/10625105
; Publication No. US20040180052A1
; GENERAL INFORMATION:
; APPLICANT: Tsuji, Takashi
; APPLICANT: Tezuka, Katsunari
; APPLICANT: Hori, Nobuaki
; TITLE OF INVENTION: HUMAN MONOCLONAL ANTIBODY AGAINST A
; TITLE OF INVENTION: COSTIMULATORY SIGNAL TRANSDUCTION MOLECULE AILIM AND
; TITLE OF INVENTION: PHARMACEUTICAL USE THEREOF

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; FILE REFERENCE: 06501-079001
; CURRENT APPLICATION NUMBER: US/10/625,105
; CURRENT FILING DATE: 2003-07-22
; PRIOR APPLICATION NUMBER: US/09/859,053
; PRIOR FILING DATE: 2001-05-16
; PRIOR APPLICATION NUMBER: JP 2001-99508
; PRIOR FILING DATE: 2001-03-30
; PRIOR APPLICATION NUMBER: JP 2000-147116
; PRIOR FILING DATE: 2000-05-18
; NUMBER OF SEQ ID NOS: 43
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 29
;   LENGTH: 974
;   TYPE: DNA
;   ORGANISM: Homo sapiens
;   FEATURE:
;   NAME/KEY: 5'UTR
;   LOCATION: (1)...(38)
;   FEATURE:
;   NAME/KEY: CDS
;   LOCATION: (39)...(746)
;   FEATURE:
;   NAME/KEY: 3'UTR
;   LOCATION: (750)...(974)
;   FEATURE:
;   NAME/KEY: sig_peptide
;   LOCATION: (39)...(104)
US-10-625-105-29

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Query Match          88.2%;  Score 370.6;  DB 17;  Length 974;
Best Local Similarity 94.1%;  Pred. No. 2e-108;
Matches 385;  Conservative 0;  Mismatches 24;  Indels 0;  Gaps 0;

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Qy      12  CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCTCCAGGTTCCAGATG 71
        ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db      44  CATGAGGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCTCCAGGTTCCAGATG 103

Qy      72  CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 131
        ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db      104 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 163

Qy     132  CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 191
        ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db     164  CATCACTTGTCGGGCGAGTCAGGATATTAGCAGGTTGTTAGCCTGGTATCAGCAGAAACC 223

Qy     192  AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC 251
        ||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db     224  AGGGAAAGCCCCTAAACTCCTGATCTATGTTGCATCCAGTTTGCAAAGTGGGGTCCCATC 283

Qy     252  AAGGTTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 311
        ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db     284  AAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 343

Qy     312  TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA 371
        ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db     344  TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAACAGTTTCCCGTGGACGTTTCGGCCA 403

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Qy            372 GGGAAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC     420  
             |||||  
Db            404 AGGGACCAAGGTGGAAATCAAACGAACTGTGGCTGCACCATCTGTCTTC     452

US-09-844-684-15

: Patent No. US20020142358A1

: APPLICANT: GEMINI SCIENCE, INC.

: TITLE OF INVENTION: HUMAN ANTI-CD40 ANTIBODIES AND METHODS OF MAKING SAME

: CURRENT APPLICATION NUMBER: US/09/844,684

; PRIOR APPLICATION NUMBER: US 60/200,601

; NUMBER OF SEQ ID NOS: 15

; SEQ ID NO 15

; TYPE: DNA

US-09-844-684-15

Best Local Similarity 93.4%; Pred. No. 6.4e-107;

Matches 382; Conservative 0; Mismatches 27; Indels 0; Gaps 0;

Qy            12 CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCAAGTTCCAGATG       71  
                ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||  
Db            64 CATGAGGGTCCCCGCTCAGCTCCTGGGCTCCTGCTGCTCTGGTTCCCAAGTTCCAGATG      123

Qy 72 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 131  
 |||||  
 Db 124 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGGATCTGTAGGAGACAGAGTCAC 183

Qy 132 CATCACTTGTCTGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 191  
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 Db 184 CATCACTTGTCTGGGCGAGTCAGGGTATTAGCAGCTGGTTAGCCTGGTATCAGCAGAAACC 243

[illegible]

Qy 252 AAGGTT CAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 311  
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 Db 304 AAGGTT CAGCGGCAGTGGATTTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 363

Qy            312 TGAAGATTTTGC AACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA       371  
                |||||  
Db            364 TGAAGATTTTGC AACTTACTATTGTCAACAGGCTAGCAGTTTCCCTCGGACATTTCGGCCA       423

Qy            372 GGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC      420  
               ||| | | | | | | | | | | | | | | | | | | | | | | | | | |  
Db            424 AGGGACCAAGGTGGAGATCAAACGTACGGTGGCTGCACCATCTGTCTTC      472

## US-10-040-244-15

Query Match 87.1%; Score 365.8; DB 14; Length 728;  
Best Local Similarity 93.4%; Pred. No. 6.4e-107;  
Matches 382; Conservative 0; Mismatches 27; Indels 0; Gaps 0;

Qy	12	CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCAAGTTCCAGATG	71
Db	64	CATGAGGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAAGTTCCAGATG	123
Qy	72	CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC	131
Db	124	CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGGATCTGTAGGAGACAGAGTCAC	183
Qy	132	CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC	191
Db	184	CATCACTTGTCGGGCGAGTCAGGGTATTAGCAGCTGGTTAGCCTGGTATCAGCAGAAACC	243
Qy	192	AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC	251
Db	244	AGGGAAAGCCCCTAAGCTCCTGATCTATGCTGGATCCAGTTTGCAAAGTGGGGTCCCATC	303
Qy	252	AAGG TTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC	311
Db	304	AAGG TTCAGCGGCAGTGGATT TGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC	363
Qy	312	TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA	371
Db	364	TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAGCAGTTTCCCTCGGACATTCGGCCA	423



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Db      244 AGGGAAAGCCCCTAAGCTCCTGATCTATGCTGGATCCAGTTTGCAAAGTGGGGTCCCATC 303
Qy      252 AAGGTTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 311
        ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db      304 AAGGTTTCAGCGGCAGTGGATTTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 363
Qy      312 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA 371
        ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db      364 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAGCAGTTTCCCTCGGACATTCCGCCA 423
Qy      372 GGGAAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 420
        ||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db      424 AGGGACCAAGGTGGAGATCAAACGTACGGTGGCTGCACCATCTGTCTTC 472

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RESULT 6

US-09-844-684-13

; Sequence 13, Application US/09844684

; Patent No. US20020142358A1

; GENERAL INFORMATION:

; APPLICANT: GEMINI SCIENCE, INC.

; APPLICANT: LA JOLLA INSTITUTE FOR ALLERGY AND IMMUNOLOGY

; TITLE OF INVENTION: HUMAN ANTI-CD40 ANTIBODIES AND METHODS OF MAKING SAME

; FILE REFERENCE: 21286/0276339

; CURRENT APPLICATION NUMBER: US/09/844,684

; CURRENT FILING DATE: 2001-04-27

; PRIOR APPLICATION NUMBER: US 60/200,601

; PRIOR FILING DATE: 2000-04-28

; NUMBER OF SEQ ID NOS: 15

; SOFTWARE: PatentIn Ver. 2.1

; SEQ ID NO 13

; LENGTH: 716

; TYPE: DNA

; ORGANISM: Homo sapiens

US-09-844-684-13

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Query Match          86.3%;  Score 362.6;  DB 9;  Length 716;
Best Local Similarity 92.9%;  Pred. No. 6.8e-106;
Matches 380;  Conservative 0;  Mismatches 29;  Indels 0;  Gaps 0;

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Qy      12 CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 71
        ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db      52 CATGAGGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 111
Qy      72 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 131
        ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db      112 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGCAGGAGACAGAGTCAC 171
Qy      132 CATCACTTGTCTGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 191
        ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db      172 CATCACTTGTCTGGGCGAGTCAGGGTATTAGCAGCTGGTTAGCCTGGTATCAACAGAAACC 231
Qy      192 AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC 251
        ||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db      232 AGGGAAAGCCCCTAAGCTCCTGATCTATGCTGGATCCAGTTTGCAAAGTGGGGTCCCATC 291
Qy      252 AAGGTTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 311

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Db	232	AGGGAAAGCCCTAAGCTCCTGATCTATGCTGGATCCAGTTTGCAAAGTGGGGTCCCATC	291
Qy	252	AAGGTTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC	311
Db	292	AAGGTTTCAGCGGCAGTGGATTGGGACAGATTTCACTCTCACCATCGGCAGCCTGCAGCC	351
Qy	312	TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA	371
Db	352	TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAGCAGTTTCCCTCGGACGTTTCGGCCA	411
Qy	372	GGGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC	420
Db	412	AGGGACCAAGGTGGAGATCAAACGTACGGTGGCTGCACCATCTGTCTTC	460

US-10-292-088-23

; Publication No. US20030211100A1

; APPLICANT: BEDIAN, VAHE

; APPLICANT: CORVALAN, JOSE

; APPLICANT: FENG, XIAO

FILE REFERENCE: ABX-PF/3 US

; CURRENT FILING DATE: 2003-03-14

; PRIOR FILING DATE: 2001-11-09

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: SOFTWARE: PatentIn Ver. 2.1

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: LENGTH: 705

; ORGANISM: Homo sapiens

Query Match 86.1%; Score 361.6; DB 15; Length 705;

Matches 379; Conservative 0; Mismatches 29; Indels 0; Gaps 0;

[illegible]

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Dh 61 GACATCCAGATCAGCGAGTCTGCATCTTCCGCTCTCTGCATCTCTAGCAGACAGAGACTCAGG 120

DD 81 GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCIGCATCTGTAGGAGACAGAGTCC 120

Ov 133 ATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACCA 192

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Db 121 ATCACTTGTCTGGGCGAGTCAGCCTATTAGCAGCTGGTTAGCCTGGTATCAGCAGAAACCA 180

112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000

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Db      181  GGGAAAGCCCCTAAACTCCTGATTTATTCTGCCTCCGGTTTGCAAAGTGGGGTCCCATCA 240
Qy      253  AGGTTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCCT 312
Db      241  AGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCCT 300
Qy      313  GAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCAG 372
Db      301  GAAGATTTTGCAACTTACTATTGTCAACAGACTGACAGTTTCCCGCTCACTTTGGGCGGC 360
Qy      373  GGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 420
Db      361  GGGACCAAGGTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 408

```

# RESULT 9

US-10-292-088-47

```

; Sequence 47, Application US/10292088
; Publication No. US20030211100A1
; GENERAL INFORMATION:
; APPLICANT: BEDIAN, VAHE
; APPLICANT: GLADUE, RONALD P.
; APPLICANT: CORVALAN, JOSE
; APPLICANT: JIA, XIAO-CHI
; APPLICANT: FENG, XIAO
; TITLE OF INVENTION: ANTIBODIES TO CD40
; FILE REFERENCE: ABX-PF/3 US
; CURRENT APPLICATION NUMBER: US/10/292,088
; CURRENT FILING DATE: 2003-03-14
; PRIOR APPLICATION NUMBER: 60/348,980
; PRIOR FILING DATE: 2001-11-09
; NUMBER OF SEQ ID NOS: 147
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 47
; LENGTH: 705
; TYPE: DNA
; ORGANISM: Homo sapiens
US-10-292-088-47

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Query Match      86.1%; Score 361.6; DB 15; Length 705;
Best Local Similarity 92.9%; Pred. No. 1.4e-105;
Matches 379; Conservative 0; Mismatches 29; Indels 0; Gaps 0;

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Qy      13  ATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATGC 72
Db      1  ATGAGGCTCCCTGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATGC 60
Qy      73  GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCACC 132
Db      61  GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCACC 120
Qy     133  ATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACCA 192
Db     121  ATCACTTGTCGGGCGAGTCAGGGTATTTACAGCTGGTTAGCCTGGTATCAGCAGAAACCA 180
Qy     193  GGTAAGACACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATCA 252

```







```

Qy      193 GGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATCA 252
      || ||||| |||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db      572 GGGAAAGCCCCCTACGCTCCTTATCTATGCTGCATCCACTTTGCAACGTGGGGTCCCATCA 513

Qy      253 AGGTTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCCT 312
      ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db      512 AGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCCT 453

Qy      313 GAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCAG 372
      ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db      452 GAAGATTTTGCAACTTACTTTTGTCAACAGGCTAACAGTTTCCCATTCACCTTTCGGCCCT 393

Qy      373 GGAACCAAGCTGGAGATCAAACGAAGTGTGGCTGCACCATCTGTCTTC 420
      || ||||| |||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db      392 GGGACCAAAGTGGATATCAAACGAAGTGTGGCTGCACCATCTGTCTTC 345

```

# RESULT 12

US-10-395-894-24

; Sequence 24, Application US/10395894

; Publication No. US20040033229A1

; GENERAL INFORMATION:

; APPLICANT: MADDON, Paul J.

; APPLICANT: DONOVAN, Gerald P.

; APPLICANT: OLSON, William C.

; APPLICANT: SCHSLKE, No. US20040033229Albert

; APPLICANT: GARDNER, Jason

; APPLICANT: MA, Dangshe

; TITLE OF INVENTION: PSMA ANTIBODIES AND PROTEIN MULTIMERS

; FILE REFERENCE: P00741.70005.US

; CURRENT APPLICATION NUMBER: US/10/395,894

; CURRENT FILING DATE: 2003-03-24

; PRIOR APPLICATION NUMBER: PCT/US02/33944

; PRIOR FILING DATE: 2002-10-23

; PRIOR APPLICATION NUMBER: US 60/335,215

; PRIOR FILING DATE: 2001-10-23

; PRIOR APPLICATION NUMBER: US 60/362,747

; PRIOR FILING DATE: 2002-03-07

; PRIOR APPLICATION NUMBER: US 60/412,618

; PRIOR FILING DATE: 2002-09-20

; NUMBER OF SEQ ID NOS: 33

; SOFTWARE: PatentIn version 3.1

; SEQ ID NO 24

; LENGTH: 463

; TYPE: DNA

; ORGANISM: Artificial Sequence

; FEATURE:

; OTHER INFORMATION: Includes BamHI/BglIII cloning junction, signal peptide, V region, portion

; OTHER INFORMATION: of C region and 3'XbaI/NheI (heavy) or NheI (light) cloning junction

US-10-395-894-24

Query Match 82.5%; Score 346.4; DB 16; Length 463;

Best Local Similarity 90.0%; Pred. No. 9.5e-101;

Matches 371; Conservative 0; Mismatches 41; Indels 0; Gaps 0;





; CURRENT APPLICATION NUMBER: US/10/395,894  
 ; CURRENT FILING DATE: 2003-03-24  
 ; PRIOR APPLICATION NUMBER: PCT/US02/33944  
 ; PRIOR FILING DATE: 2002-10-23  
 ; PRIOR APPLICATION NUMBER: US 60/335,215  
 ; PRIOR FILING DATE: 2001-10-23  
 ; PRIOR APPLICATION NUMBER: US 60/362,747  
 ; PRIOR FILING DATE: 2002-03-07  
 ; PRIOR APPLICATION NUMBER: US 60/412,618  
 ; PRIOR FILING DATE: 2002-09-20  
 ; NUMBER OF SEQ ID NOS: 33  
 ; SOFTWARE: PatentIn version 3.1  
 ; SEQ ID NO 10  
 ; LENGTH: 6082  
 ; TYPE: DNA  
 ; ORGANISM: Artificial Sequence  
 ; FEATURE:  
 ; OTHER INFORMATION: Plasmid  
 US-10-395-894-10

Query Match 82.5%; Score 346.4; DB 16; Length 6082;  
 Best Local Similarity 90.0%; Pred. No. 2e-100;  
 Matches 371; Conservative 0; Mismatches 41; Indels 0; Gaps 0;

Qy	9	CACCATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTCCCAGGTTCCAG	68
Db	913	CACCATGAGGGTCCCTGCTCAGCTCCTGGGGCTCCTGCTGCTCTGTTTCCCAGGTGCCAG	972
Qy	69	ATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGT	128
Db	973	ATGTGACATCCAGATGACCCAGTCTCCATCCTCACTGTCTGCATCTGTAGGAGACAGAGT	1032
Qy	129	CACCATCACTTGTCTGGGCGAGTCAAGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAA	188
Db	1033	CACCATCACTTGTCTGGGCGAGTCAAGGCAATTAGCCATTATTTAGCCTGGTTTCAGCAGAA	1092
Qy	189	ACCAGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCC	248
Db	1093	ACCAGGGAAAGCCCCTAAGTCCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCC	1152
Qy	249	ATCAAGGTTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCA	308
Db	1153	ATCAAAGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTACA	1212
Qy	309	GCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGG	368
Db	1213	GCCTGAAGATTTTGCAACTTATTACTGCCAACAGTATAATAGTTTCCCGCTCACTTTTCGG	1272
Qy	369	TCAGGGAACCAAGCTGGAGATCAAACGAAGTGTGGCTGCACCATCTGTCTTC	420
Db	1273	CGGAGGGACCAAGGTGGAGATCAAACGAAGTGTGGCTGCACCATCTGTCTTC	1324

RESULT 15

US-10-695-667-10

; Sequence 10, Application US/10695667

; Publication No. US20040161776A1



Db 1213 GCCTGAAGATTTTGCAACTTATTACTGCCAACAGTATAATAGTTTCCCGCTCACTTTTCGG 1272

Qy 369 TCAGGGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 420

Db 1273 CGGAGGGACCAAGGTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 1324

Search completed: December 3, 2004, 02:43:24  
Job time : 323.011 secs

GenCore version 5.1.6  
Copyright (c) 1993 - 2004 Compugen Ltd.

OM nucleic - nucleic search, using sw model

Run on: December 2, 2004, 12:19:03 ; Search time 2186.2 Seconds  
(without alignments)  
7000.593 Million cell updates/sec

Title: US-08-728-463B-220  
Perfect score: 420  
Sequence: 1 AAGCTTGCCACCATGATGGT.....TGGCTGCACCATCTGTCTTC 420

Scoring table: IDENTITY\_NUC  
Gapop 10.0 , Gapext 1.0

Searched: 32822875 seqs, 18219865908 residues

Total number of hits satisfying chosen parameters: 65645750

Minimum DB seq length: 0  
Maximum DB seq length: 20000000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

Database : EST:\*  
1: gb\_est1:\*  
2: gb\_est2:\*  
3: gb\_htc:\*  
4: gb\_est3:\*  
5: gb\_est4:\*  
6: gb\_est5:\*  
7: gb\_est6:\*  
8: gb\_gss1:\*  
9: gb\_gss2:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

# SUMMARIES

		%				
Result		Query				
No.	Score	Match	Length	DB	ID	Description



1	385	91.7	943	2	BF976230	BF976230	602245105
2	373.8	89.0	1100	2	BF663472	BF663472	602144635
3	372.2	88.6	606	6	CD690290	CD690290	EST6813 h
4	370.6	88.2	755	4	BG533970	BG533970	602553071
5	369	87.9	472	6	CD702614	CD702614	EST19139
6	364.2	86.7	497	6	CD696718	CD696718	EST13241
7	364.2	86.7	558	6	CD690030	CD690030	EST6553 h
8	364.2	86.7	605	6	CD688415	CD688415	EST4937 h
9	363.4	86.5	851	4	BG686018	BG686018	602638582
10	363.4	86.5	894	4	BG341803	BG341803	602463535
11	359.4	85.6	912	2	BF129120	BF129120	601811580
12	356.2	84.8	510	6	CD694557	CD694557	EST11080
13	353.8	84.2	818	3	CR597684	CR597684	full-leng
14	353	84.0	484	6	CD696042	CD696042	EST12565
15	352.8	84.0	903	5	BQ706785	BQ706785	AGENCOURT
16	350.4	83.4	1112	4	BM924778	BM924778	AGENCOURT
17	350	83.3	561	6	CD706288	CD706288	EST22815
18	349.8	83.3	487	2	AW405988	AW405988	UI-HF-BLO
19	349.8	83.3	611	6	CD702728	CD702728	EST19253
20	349.8	83.3	724	4	BI837410	BI837410	603086702
21	349.8	83.3	759	6	CB984469	CB984469	AGENCOURT
22	349.8	83.3	886	4	BG756818	BG756818	602710291
23	349	83.1	906	4	BG756264	BG756264	602713576
24	348.2	82.9	769	6	CB957759	CB957759	AGENCOURT
25	348	82.9	710	6	CD695065	CD695065	EST11588
26	346.6	82.5	545	6	CD697196	CD697196	EST13719
27	346	82.4	486	6	CD683960	CD683960	EST480 hu
28	345	82.1	433	2	AW951891	AW951891	EST363961
29	345	82.1	629	6	CD697149	CD697149	EST13672
30	345	82.1	630	6	CD694356	CD694356	EST10879
31	345	82.1	689	6	CB055233	CB055233	NISC_gm08
32	345	82.1	830	4	BG535683	BG535683	602563394
33	343.4	81.8	560	4	BM823497	BM823497	K-EST0094
34	343.4	81.8	741	6	CB958688	CB958688	AGENCOURT
35	341.8	81.4	504	6	CD696759	CD696759	EST13282
36	341.8	81.4	610	6	CD691065	CD691065	EST7588 h
37	341.8	81.4	631	5	BX646383	BX646383	DKFZp781G
38	341.8	81.4	677	6	CD692170	CD692170	EST8709 h
39	340.4	81.0	726	6	CB986484	CB986484	AGENCOURT
40	340.2	81.0	624	6	CD690145	CD690145	EST6668 h
41	340.2	81.0	805	6	CB955618	CB955618	AGENCOURT
42	339.4	80.8	1038	4	BG757218	BG757218	602710591
43	338.6	80.6	447	2	AW405752	AW405752	UI-HF-BLO
44	338.6	80.6	574	6	CD710508	CD710508	EST27035
45	338.6	80.6	770	6	CB987520	CB987520	AGENCOURT

# ALIGNMENTS

## RESULT 1

BF976230

LOCUS BF976230 943 bp mRNA linear EST 22-JAN-2001

DEFINITION 602245105F1 NIH\_MGC\_48 Homo sapiens cDNA clone IMAGE:4336225 5', mRNA sequence.

ACCESSION BF976230

```

VERSION      BF976230.1   GI:12343445
KEYWORDS     EST.
SOURCE       Homo sapiens (human)
ORGANISM     Homo sapiens
              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
              Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE    1 (bases 1 to 943)
AUTHORS      NIH-MGC http://mgc.nci.nih.gov/.
TITLE        National Institutes of Health, Mammalian Gene Collection (MGC)
JOURNAL      Unpublished (1999)
COMMENT      Contact: Robert Strausberg, Ph.D.
              Email: cgapbs-r@mail.nih.gov
              Tissue Procurement: Louis M. Staudt, M.D., Ph.D.
              cDNA Library Preparation: Ling Hong/Rubin Laboratory
              cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
              DNA Sequencing by: Incyte Genomics, Inc.
              Clone distribution: MGC clone distribution information can be
              found through the I.M.A.G.E. Consortium/LLNL at:
              http://image.llnl.gov
              Plate: LLCM1208 row: j column: 02
              High quality sequence stop: 721.

FEATURES             Location/Qualifiers
     source            1. .943
                       /organism="Homo sapiens"
                       /mol_type="mRNA"
                       /db_xref="taxon:9606"
                       /clone="IMAGE:4336225"
                       /tissue_type="primary B-cells from tonsils (cell line)"
                       /lab_host="DH10B (phage-resistant)"
                       /clone_lib="NIH_MGC_48"
                       /note="Organ: B-cells; Vector: pOTB7; Site_1: XhoI;
                       Site_2: EcoRI; cDNA made by oligo-dT priming.
                       Directionally cloned into EcoRI/XhoI sites using the
                       following 5' adaptor: GGCACGAG(G). Size-selected >500bp
                       for average insert size 1.8kb. Library constructed by Ling
                       Hong in the laboratory of Gerald M. Rubin (University of
                       California, Berkeley) using ZAP-cDNA synthesis kit
                       (Stratagene) and Superscript II RT (Life Technologies).
                       Note: this is a NIH_MGC Library."

ORIGIN
Query Match          91.7%; Score 385; DB 2; Length 943;
Best Local Similarity 96.3%; Pred. No. 2.9e-109;
Matches 394; Conservative 0; Mismatches 15; Indels 0; Gaps 0;

Qy      12 CATGATGGTCCCAGCTCAGCTCCTCGGTCTCTGCTGCTCTGGTTCCCAGGTTCCAGATG 71
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Db      23 CATGAGGGTCCCCGCTCAGCTCCTGGGGCTCTGCTGCTCTGGTTCCCAGGTTCCAGATG 82

Qy      72 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 131
        ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db      83 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 142

Qy      132 CATCACTTGTCTGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 191
        ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db      143 CATCACTTGTCTGGGCGAGTCAGGGTATTAGCAGCTGGTTAGCCTGGTATCAGCAGAAACC 202

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[illegible]

## RESULT 2

BF663472

LOCUS	BF663472	1100 bp	mRNA	linear	EST 21-DEC-2000
-------	----------	---------	------	--------	-----------------

DEFINITION 602144635F1 NIH\_MGC\_48 Homo sapiens cDNA clone IMAGE:4297736 5', mRNA sequence.

ACCESSION      BF663472

VERSION BF663472.1 GI:11937367

KEYWORDS EST.

SOURCE Homo sapiens (human)

ORGANISM Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

REFERENCE 1 (bases 1 to 1100)

AUTHORS NIH-MGC <http://mgc.nci.nih.gov/>.

TITLE      National Institutes of Health, Mammalian Gene Collection (MGC)

JOURNAL Unpublished (1999)

COMMENT      Contact: Robert Strausberg, Ph.D.

Email: [cqapbs-r@mail.nih.gov](mailto:cqapbs-r@mail.nih.gov)

Tissue Procurement: Louis M. Staudt, M.D., Ph.D.

cDNA Library Preparation: Ling Hong/Rubin Laboratory

cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)

DNA Sequencing by: Incyte Genomics, Inc.

Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:

<http://image.llnl.gov>

Plate: LLCM1152 row: f column: 09

High quality sequence stop: 704.

## FEATURES

source

Location/Qualifiers

1. .1100

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/organism="Homo sapiens"
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./mol type="mRNA"
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/db xref="taxon:9606"
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```
/clone="IMAGE:4297736"
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/tissue type="primary B-cells from tonsils (cell line)"
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```
/lab host="DH10B (phage-resistant)"
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/clone lib="NIH MGC 48"
```

/note="Organ: B-cells; Vector: pOTB7; Site 1: XhoI;

Site 2: EcoRI; cDNA made by oligo-dT priming.

Directionally cloned into EcoRI/XhoI sites using the following 5' adaptor: GGCACGAG(G). Size-selected >500bp

for average insert size 1.8kb. Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZAP-cDNA synthesis kit (Stratagene) and Superscript II RT (Life Technologies).  
Note: this is a NIH\_MGC Library."

# ORIGIN

Query Match 89.0%; Score 373.8; DB 2; Length 1100;  
Best Local Similarity 94.6%; Pred. No. 1e-105;  
Matches 387; Conservative 0; Mismatches 22; Indels 0; Gaps 0;

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Qy      12 CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTCCCAGGTTCAGATG 71
        ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db      13 CATGAGGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTCCCAGGTTCAGATG 72

Qy      72 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 131
        ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db      73 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 132

Qy      132 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 191
        ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db      133 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAGAAACC 192

Qy      192 AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC 251
        ||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db      193 AGGGAAAGCCCCTAAGCTCCTGATCTATGCTTCATCCAGTTTGCAAAGTGGGGTCCCATC 252

Qy      252 AAGGTTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 311
        ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db      253 AAGGTTTCAGCGGAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 312

Qy      312 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA 371
        ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db      313 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAACAGTTTCCCTCTCACTTTTCGGCGG 372

Qy      372 GGGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 420
        || ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db      373 AGGGACCAAGGTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 421

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## RESULT 3

CD690290

LOCUS CD690290 606 bp mRNA linear EST 25-JUN-2003

DEFINITION EST6813 human nasopharynx Homo sapiens cDNA, mRNA sequence.

ACCESSION CD690290

VERSION CD690290.1 GI:32210896

KEYWORDS EST.

SOURCE Homo sapiens (human)

ORGANISM Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

REFERENCE 1 (bases 1 to 606)

AUTHORS Liu,X.-Q., Zhou,Y., Zhang,L.-J., Xu,H., Chen,H.-K., Pan,Z.-G. and  
Zeng,Y.-X.

TITLE Transcriptional Gene Expression Profile of Human Nasopharynx

JOURNAL Unpublished (2003)

COMMENT Contact: YiXin Zeng

FEATURES	Location/Qualifiers
source	1. .606 /organism="Homo sapiens" /mol_type="mRNA" /db_xref="taxon:9606" /tissue_type="normal nasopharynx" /clone_lib="human nasopharynx" /note="ESTs generated from a normal nasopharynx cDNA library from southern Chinese"

Query Match 88.6%; Score 372.2; DB 6; Length 606;  
Best Local Similarity 94.4%; Pred. No. 2.6e-105;  
Matches 386; Conservative 0; Mismatches 23; Indels 0; Gaps 0;

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RESULT 4
BG533970
LOCUS      BG533970              755 bp      mRNA      linear      EST 03-APR-2001
DEFINITION 602553071F1 NIH_MGC_77 Homo sapiens cDNA clone IMAGE:4663096 5',
            mRNA sequence.
ACCESSION  BG533970
VERSION    BG533970.1  GI:13525510

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KEYWORDS EST.

SOURCE Homo sapiens (human)

ORGANISM Homo sapiens  
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

REFERENCE 1 (bases 1 to 755)

AUTHORS NIH-MGC <http://mgc.nci.nih.gov/>.

TITLE National Institutes of Health, Mammalian Gene Collection (MGC)

JOURNAL Unpublished (1999)

COMMENT Contact: Robert Strausberg, Ph.D.  
Email: [cgapbs-r@mail.nih.gov](mailto:cgapbs-r@mail.nih.gov)  
Tissue Procurement: CLONTECH Laboratories, Inc.  
cDNA Library Preparation: CLONTECH Laboratories, Inc.  
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)  
DNA Sequencing by: Incyte Genomics, Inc.  
Clone distribution: MGC clone distribution information can be  
found through the I.M.A.G.E. Consortium/LLNL at:  
<http://image.llnl.gov>  
Plate: LLCM1464 row: m column: 17  
High quality sequence stop: 726.

FEATURES Location/Qualifiers

source 1..755  
/organism="Homo sapiens"  
/mol\_type="mRNA"  
/db\_xref="taxon:9606"  
/clone="IMAGE:4663096"  
/lab\_host="DH10B (T1 phage-resistant)"  
/clone\_lib="NIH\_MGC\_77"  
/note="Organ: lung; Vector: pDNR-LIB (Clontech); Site\_1:  
SfiI (ggccgcctcggcc); Site\_2: SfiI (ggccattatggcc); 5' and  
3' adaptors were used in cloning as follows: 5' adaptor  
sequence: 5'-CACGGCCATTATGGCC-3' and 3' adaptor sequence:  
5'-ATTCTAGAGGCCGAGGCGCCGACATG-dT(30)BN-3' (where B = A,  
C, or G and N = A, C, G, or T). Average insert size 1.9  
kb (range 0.5-4.0 kb). 12/15 colonies contained inserts  
by PCR. This library was enriched for full-length clones  
and was constructed by Clontech Laboratories (Palo Alto,  
CA). Note: this is a NIH\_MGC Library."

#### ORIGIN

Query Match 88.2%; Score 370.6; DB 4; Length 755;  
Best Local Similarity 94.1%; Pred. No. 9e-105;  
Matches 385; Conservative 0; Mismatches 24; Indels 0; Gaps 0;

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Qy      12 CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 71
        ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db      33 CATGAGGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 92

Qy      72 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 131
        ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db      93 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACGGAGTCAC 152

Qy     132 CATCACTTGTCTGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 191
        ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db     153 CATCACTTGTCTGGGCGAGTCAGGGTATCAGCAGCTGGTTAGCCTGGTATCAGCAGAAAGC 212

Qy     192 AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC 251

```



Qy 72 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 131  
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 Db 117 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGCGTCAC 176  
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 Qy 132 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 191  
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 Db 177 CATCACTTGTCGGGCGAGTCAGGCTATTAGCACCTGGTTAGCCTGGTATCAGCAGAAACC 236  
 |||  
 Qy 192 AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC 251  
 |||  
 Db 237 AGGGAAAGCCCCTAAGCTCCTGATCTATACTGCATCCAGTTTGCAAAGTGGGGTCCCATC 296  
 |||  
 Qy 252 AAGGTTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 311  
 |||  
 Db 297 AAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 356  
 |||  
 Qy 312 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA 371  
 |||  
 Db 357 TGAAGATTTTGCAACTTACTATGGTCAACAGGCTAACAGTTTCCCTCTCACTTTTCGGCGG 416  
 |||  
 Qy 372 GGGAACCAAGCTGGAGATCAAACGAACGTGTGGCTGCACCATCTGTCTTC 420  
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 Db 417 AGGGACCAAGGTGGAGATCAAACGAACGTGTGGCTGCACCATCTGTCTTC 465  
 |||

# RESULT 6

CD696718

LOCUS CD696718 497 bp mRNA linear EST 25-JUN-2003

DEFINITION EST13241 human nasopharynx Homo sapiens cDNA, mRNA sequence.

ACCESSION CD696718

VERSION CD696718.1 GI:32223477

KEYWORDS EST.

SOURCE Homo sapiens (human)

ORGANISM Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

REFERENCE 1 (bases 1 to 497)

AUTHORS Liu,X.-Q., Zhou,Y., Zhang,L.-J., Xu,H., Chen,H.-K., Pan,Z.-G. and  
 Zeng,Y.-X.

TITLE Transcriptional Gene Expression Profile of Human Nasopharynx

JOURNAL Unpublished (2003)

COMMENT Contact: YiXin Zeng

Cancer Center

Sun Yat-sen University

651 DongFeng Road East, GuangZhou 510060, China

Tel: 86-1380-9770-743

Fax: 86-20-8775-4506

Email: yxzeng@gzsums.edu.cn.

FEATURES

Location/Qualifiers

source

1. .497

/organism="Homo sapiens"

/mol\_type="mRNA"

/db\_xref="taxon:9606"

/tissue\_type="normal nasopharynx"

/clone\_lib="human nasopharynx"

/note="ESTs generated from a normal nasopharynx cDNA"



ORIGIN

[illegible]

## CD690030

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LOCUS       CD690030                558 bp      linear      EST 25-JUN-2003
DEFINITION  EST6553 human nasopharynx Homo sapiens cDNA, mRNA sequence.
ACCESSION   CD690030
VERSION     CD690030.1   GI:32210387
KEYWORDS    EST.
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
             Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1   (bases 1 to 558)
  AUTHORS   Liu,X.-Q., Zhou,Y., Zhang,L.-J., Xu,H., Chen,H.-K., Pan,Z.-G. and
             Zeng,Y.-X.
  TITLE     Transcriptional Gene Expression Profile of Human Nasopharynx
  JOURNAL   Unpublished (2003)
COMMENT     Contact: YiXin Zeng
             Cancer Center
             Sun Yat-sen University
             651 DongFeng Road East, GuangZhou 510060, China
             Tel: 86-1380-9770-743

```

Email: yxzeng@gzsums.edu.cn.

ORIGIN

Qy	12	CATGATGGTCCCAGCTCAGCTCCTCGGTTCCTGCTGCTCTGGTTCCCAAGTTCCAGATG	71
Db	55	CATGAGGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAAGTTCCAGATG	114
Qy	72	CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC	131
Db	115	CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC	174
Qy	132	CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC	191
Db	175	CATCACTTGTCGGGCGAGTCAGGGTATTAGCACCTGGTTAGCCTGGTATCAGCAGAAACC	234
Qy	192	AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC	251
Db	235	AGGGAAAGCCCCATAACTCCTGATCTATGCTGCATCCAATTTGCTAAGTGGGGTCCCATC	294
Qy	252	AAGGTTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC	311
Db	295	AAGATTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAACAGCCTGCAGCC	354
Qy	312	TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTTCCCGTACACTTTTGGTCA	371
Db	355	TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAACAGTTTCCCTCGGACGTTTCGGCCA	414
Qy	372	GGAACCAAGCTGGAGATCAAACGAAGTGTGGCTGCACCATCTGTCTTC	420
Db	415	AGGGACCAAGGTGGAATCAAACGAAGTGTGGCTGCACCATCTGTCTTC	463

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RESULT 8
CD688415
LOCUS          CD688415                605 bp      mRNA      linear      EST 25-JUN-2003
DEFINITION     EST4937 human nasopharynx Homo sapiens cDNA, mRNA sequence.
ACCESSION      CD688415
VERSION        CD688415.1  GI:32207195
KEYWORDS       EST.
SOURCE         Homo sapiens (human)
ORGANISM       Homo sapiens
                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

```

REFERENCE 1 (bases 1 to 605)  
AUTHORS Liu,X.-Q., Zhou,Y., Zhang,L.-J., Xu,H., Chen,H.-K., Pan,Z.-G. and Zeng,Y.-X.  
TITLE Transcriptional Gene Expression Profile of Human Nasopharynx  
JOURNAL Unpublished (2003)  
COMMENT Contact: YiXin Zeng  
Cancer Center  
Sun Yat-sen University  
651 DongFeng Road East, GuangZhou 510060, China  
Tel: 86-1380-9770-743  
Fax: 86-20-8775-4506  
Email: yxzeng@gzsums.edu.cn.

FEATURES Location/Qualifiers  
source 1. .605  
/organism="Homo sapiens"  
/mol\_type="mRNA"  
/db\_xref="taxon:9606"  
/tissue\_type="normal nasopharynx"  
/clone\_lib="human nasopharynx"  
/note="ESTs generated from a normal nasopharynx cDNA library from southern Chinese"

# ORIGIN

Query Match 86.7%; Score 364.2; DB 6; Length 605;  
Best Local Similarity 93.2%; Pred. No. 8.6e-103;  
Matches 381; Conservative 0; Mismatches 28; Indels 0; Gaps 0;

Qy	12	CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG	71
Db	52	CATGAGGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG	111
Qy	72	CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC	131
Db	112	CGACATCCACATGACCCAGTCTCCATCTTCTGTGTCTGCATCTGTTGGAGACAGAGTCAC	171
Qy	132	CATCACTTGTCTGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC	191
Db	172	CATCACTTGTCTGGGCGAGTCAGGGTATTAGCAGCTGGTTAGCCTGGTATCAGCAGAAACC	231
Qy	192	AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC	251
Db	232	AGGGAAAGCCCCTAAACTCCTGATCTCTACTGCATCCAGTTTGCAAAGTGGGGTCCCATC	291
Qy	252	AAGGTTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC	311
Db	292	AAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACTATCAGCAGCCTGCAGCC	351
Qy	312	TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA	371
Db	352	TGAAGATTTTGCAACTTACTATTGTCAACAGACTAACAGTTTCCCGCTCACTTTTCGGCGG	411
Qy	372	GGGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC	420
Db	412	AGGGACCAAGGTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC	460

```

BG686018
LOCUS      BG686018                      851 bp      mRNA      linear      EST 01-MAY-2001
DEFINITION 602638582F1 NIH_MGC_48 Homo sapiens cDNA clone IMAGE:4766157 5',
            mRNA sequence.
ACCESSION  BG686018
VERSION    BG686018.1  GI:13917415
KEYWORDS   EST.
SOURCE     Homo sapiens (human)
  ORGANISM Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE  1 (bases 1 to 851)
  AUTHORS  NIH-MGC http://mgc.nci.nih.gov/.
  TITLE    National Institutes of Health, Mammalian Gene Collection (MGC)
  JOURNAL  Unpublished (1999)
COMMENT    Contact: Robert Strausberg, Ph.D.
            Email: cgapbs-r@mail.nih.gov
            Tissue Procurement: Louis M. Staudt, M.D., Ph.D.
            cDNA Library Preparation: Ling Hong/Rubin Laboratory
            cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
            DNA Sequencing by: Incyte Genomics, Inc.
            Clone distribution: MGC clone distribution information can be
            found through the I.M.A.G.E. Consortium/LLNL at:
            http://image.llnl.gov
            Plate: LLCM1626 row: c column: 22
            High quality sequence stop: 851.

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ORIGIN

Query Match 86.5%; Score 363.4; DB 4; Length 851;  
Best Local Similarity 94.6%; Pred. No. 1.7e-102;  
Matches 387; Conservative 0; Mismatches 21; Indels 1; Gaps 1;

[illegible]

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Qy      132 CATCACTTGTCTGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAAACC 191
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Db      133 CATCACTTGTCTGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCAGAAACC 192

Qy      192 AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC 251
      |||
Db      193 AGG-AAAGCCCCCTAAGCTCCTGATCTATGCTTCATCCAGTTTGCAAAGTGGGGTCCCATC 251

Qy      252 AAGGTTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 311
      |||
Db      252 AAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 311

Qy      312 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA 371
      |||
Db      312 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAACAGTTTCCCTCTCACTTTTCGGCGG 371

Qy      372 GGGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 420
      ||
Db      372 AGGGACCAAGGTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 420

```

# RESULT 10

BG341803

LOCUS BG341803 894 bp mRNA linear EST 27-FEB-2001

DEFINITION 602463535F1 NIH\_MGC\_48 Homo sapiens cDNA clone IMAGE:4576136 5', mRNA sequence.

ACCESSION BG341803

VERSION BG341803.1 GI:13148241

KEYWORDS EST.

SOURCE Homo sapiens (human)

ORGANISM Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

REFERENCE 1 (bases 1 to 894)

AUTHORS NIH-MGC <http://mgc.nci.nih.gov/>.

TITLE National Institutes of Health, Mammalian Gene Collection (MGC)

JOURNAL Unpublished (1999)

COMMENT Contact: Robert Strausberg, Ph.D.

Email: [cgapbs-r@mail.nih.gov](mailto:cgapbs-r@mail.nih.gov)

Tissue Procurement: Louis M. Staudt, M.D., Ph.D.

cDNA Library Preparation: Ling Hong/Rubin Laboratory

cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)

DNA Sequencing by: Incyte Genomics, Inc.

Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:

<http://image.llnl.gov>

Plate: LLCM1288 row: f column: 09

High quality sequence stop: 636.

## FEATURES

source

Location/Qualifiers

1..894

/organism="Homo sapiens"

/mol\_type="mRNA"

/db\_xref="taxon:9606"

/clone="IMAGE:4576136"

/tissue\_type="primary B-cells from tonsils (cell line)"

/lab\_host="DH10B (phage-resistant)"

## ORIGIN

[illegible]

BF129120

```

LOCUS      BF129120                      912 bp      mRNA      linear      EST 24-OCT-2000
DEFINITION 601811580F1 NIH_MGC_48 Homo sapiens cDNA clone IMAGE:4054530 5',
            mRNA sequence.
ACCESSION   BF129120
VERSION     BF129120.1  GI:10968160
KEYWORDS    EST.
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

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REFERENCE 1 (bases 1 to 912)

AUTHORS NIH-MGC <http://mgc.nci.nih.gov/>.

TITLE National Institutes of Health, Mammalian Gene Collection (MGC)

JOURNAL Unpublished (1999)

COMMENT Contact: Robert Strausberg, Ph.D.  
 Email: [cgapbs-r@mail.nih.gov](mailto:cgapbs-r@mail.nih.gov)  
 Tissue Procurement: Louis M. Staudt, M.D., Ph.D.  
 cDNA Library Preparation: Ling Hong/Rubin Laboratory  
 cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)  
 DNA Sequencing by: Incyte Genomics, Inc.  
 Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: <http://image.llnl.gov>  
 Plate: LLCM894 row: p column: 19  
 High quality sequence stop: 695.

FEATURES Location/Qualifiers

source 1. .912  
 /organism="Homo sapiens"  
 /mol\_type="mRNA"  
 /db\_xref="taxon:9606"  
 /clone="IMAGE:4054530"  
 /tissue\_type="primary B-cells from tonsils (cell line)"  
 /lab\_host="DH10B (phage-resistant)"  
 /clone\_lib="NIH\_MGC\_48"  
 /note="Organ: B-cells; Vector: pOTB7; Site\_1: XhoI; Site\_2: EcoRI; cDNA made by oligo-dT priming. Directionally cloned into EcoRI/XhoI sites using the following 5' adaptor: GGCACGAG(G). Size-selected >500bp for average insert size 1.8kb. Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZAP-cDNA synthesis kit (Stratagene) and Superscript II RT (Life Technologies). Note: this is a NIH\_MGC Library."

ORIGIN

Query Match 85.6%; Score 359.4; DB 2; Length 912;  
 Best Local Similarity 92.4%; Pred. No. 3.1e-101;  
 Matches 378; Conservative 0; Mismatches 31; Indels 0; Gaps 0;

Qy 12 CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCACAGGTTCCAGATG 71  
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Db 4 CATGAGGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCACAGGTTCTAGATG 63

Qy 72 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 131  
 ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||

Db 64 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCCGTAGGAGACAGAGTCAC 123

Qy 132 CATCACTTGTCTGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 191  
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Db 124 CATCACTTGTCTGGGCGAGTCAGGATATTAGTAGTTGGTTAGCCTGGTATCAGCAGAAACC 183

Qy 192 AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC 251  
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Db 184 AGGGAAAGCCCTAAACTCCTGATCTATGCTGCATCCAGTTTACAAAGTGGGGTCCCATC 243

Qy 252 AAGGTTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 311  
 ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||

Db 244 AAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTACAGCC 303

Qy 312 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA 371  
 |||||

Db 304 TGAAGATTTTGCAACTTACCATTGTCTACAGACTAACAGTTTCCCATTCACCTTCGGCCC 363

Qy 372 GGGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 420  
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Db 364 TGGGACCAAAGTGGATATCAAGCGAACTGTGGCTGCACCATCTGTCTTC 412

RESULT 12  
 CD694557

LOCUS CD694557 510 bp mRNA linear EST 25-JUN-2003

DEFINITION EST11080 human nasopharynx Homo sapiens cDNA, mRNA sequence.

ACCESSION CD694557

VERSION CD694557.1 GI:32219318

KEYWORDS EST.

SOURCE Homo sapiens (human)

ORGANISM Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

REFERENCE 1 (bases 1 to 510)

AUTHORS Liu,X.-Q., Zhou,Y., Zhang,L.-J., Xu,H., Chen,H.-K., Pan,Z.-G. and  
 Zeng,Y.-X.

TITLE Transcriptional Gene Expression Profile of Human Nasopharynx

JOURNAL Unpublished (2003)

COMMENT Contact: YiXin Zeng

Cancer Center

Sun Yat-sen University

651 DongFeng Road East, GuangZhou 510060, China

Tel: 86-1380-9770-743

Fax: 86-20-8775-4506

Email: yxzeng@gzsums.edu.cn.

FEATURES

source

Location/Qualifiers

1..510

/organism="Homo sapiens"

/mol\_type="mRNA"

/db\_xref="taxon:9606"

/tissue\_type="normal nasopharynx"

/clone\_lib="human nasopharynx"

/note="ESTs generated from a normal nasopharynx cDNA

library from southern Chinese"

ORIGIN

Query Match 84.8%; Score 356.2; DB 6; Length 510;

Best Local Similarity 91.9%; Pred. No. 2.6e-100;

Matches 376; Conservative 0; Mismatches 33; Indels 0; Gaps 0;

Qy 12 CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTCCCAGGTTCCAGATG 71  
 |||||

Db 66 CATGAGGGTCCCCGCTCAGCTCCTGGGCTCCTGCTGCTCTGGTCCCAGGTTCCAGATG 125

Qy 72 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 131  
 |||||

Db 126 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCTTCTGTGGGAGACAGCGTCAC 185



[illegible]

## RESULT 13

CR597684

LOCUS CR597684 818 bp mRNA linear HTC 21-JUL-2004

**DEFINITION** full-length cDNA clone CS0DI026YL22 of Placenta Cot 25-normalized of Homo sapiens (human).

ACCESSION CR597684  
VERSION CR597684.1 GI:50478491

**KEYWORDS** HTC; CNSLT cDNA.

SOURCE Homo sapiens (human)

ORGANISM Homo sapiens

REFERENCE 1 (bases 1 to 818)

AUTHORS Li, W.B., Gruber, C., Jessee, J. and Polayes, D.

TITLE	Full-length
JOURNAL	Unpublished

REMARK      Contact : Feng Liang Email : fliang@lifetech.com URL :  
http://fulllength.invitrogen.com/ InVitroGen Corporation 1600  
Faraday Avenue

REFERENCE 2 (bases 1 to 818)

AUTHORS      Genoscope.

TITLE Direct Submission

COMMENT 1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-strand cDNA was digested with Not I and cloned into the Not I and EcoR V sites of the pCMVSPORT 6 vector. Library was normalized. Library was constructed by Life Technologies, a division of Invitrogen.

FEATURES Location/Qualifiers

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source      1.  .818
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/organism="Homo sapiens"
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/mol type="mRNA"
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/db xref="taxon:9606"
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/clone="CS0DI026YL22"
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/tissue\_type="Placenta Cot 25-normalized"  
/plasmid="pCMVSPORT\_6"

ORIGIN

Query Match 84.2%; Score 353.8; DB 3; Length 818;  
Best Local Similarity 93.6%; Pred. No. 1.7e-99;  
Matches 381; Conservative 0; Mismatches 22; Indels 4; Gaps 1;

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Qy      18 GGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATGCGACAT 77
      ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db      1  GGTCCCCGCTCAGCTCCTGCGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATGCGACAT 60

Qy      78 CCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCACCATCAC 137
      ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db      61 CCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCACCATCAC 120

Qy     138 TTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAAACCAGGTAA 197
      ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db     121 TTGTCGGGCGAGTCAGGGTATTAGCAGCTGGTTAGCCTGGTATCAGCAGAAACCAGGGAA 180

Qy     198 AGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATCAAGGTT 257
      ||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db     181 AGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATCAAGGTT 240

Qy     258 CAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCCTGAAGA 317
      ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db     241 CAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCCTGAAGA 300

Qy     318 TTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCC---GTACACTTTTGGTCAGG 373
      ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db     301 TTTTGCAACTTACTATTGTCAACAGGCTAACACTCTCACTGTGGTGGACGTTTCGGCCAAG 360

Qy     374 GAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 420
      | ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db     361 GGACCAAGGTGGAATCAAACGAACTGTGGCTGCACCATCTGTCTTC 407
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RESULT 14

CD696042

LOCUS CD696042 484 bp mRNA linear EST 25-JUN-2003

DEFINITION EST12565 human nasopharynx Homo sapiens cDNA, mRNA sequence.

ACCESSION CD696042

VERSION CD696042.1 GI:32222175

KEYWORDS EST.

SOURCE Homo sapiens (human)

ORGANISM Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

REFERENCE 1 (bases 1 to 484)

AUTHORS Liu,X.-Q., Zhou,Y., Zhang,L.-J., Xu,H., Chen,H.-K., Pan,Z.-G. and  
Zeng,Y.-X.

TITLE Transcriptional Gene Expression Profile of Human Nasopharynx

JOURNAL Unpublished (2003)

COMMENT Contact: YiXin Zeng

Cancer Center

Sun Yat-sen University

651 DongFeng Road East, GuangZhou 510060, China

FEATURES	Location/Qualifiers
source	1..484 /organism="Homo sapiens" /mol_type="mRNA" /db_xref="taxon:9606" /tissue_type="normal nasopharynx" /clone_lib="human nasopharynx" /note="ESTs generated from a normal nasopharynx cDNA library from southern Chinese"

Query Match 84.0%; Score 353; DB 6; Length 484;  
Best Local Similarity 91.4%; Pred. No. 2.6e-99;  
Matches 374; Conservative 0; Mismatches 35; Indels 0; Gaps 0;

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LOCUS       BQ706785                903 bp      mRNA      linear      EST 16-JUL-2002
DEFINITION  AGENCOURT_7977104 NIH_MGC_113 Homo sapiens cDNA clone IMAGE:6216052
            5', mRNA sequence.
ACCESSION   BQ706785
VERSION     BQ706785.1  GI:21845684
KEYWORDS    EST.
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens

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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

REFERENCE 1 (bases 1 to 903)

AUTHORS NIH-MGC <http://mgc.nci.nih.gov/>.

TITLE National Institutes of Health, Mammalian Gene Collection (MGC)

JOURNAL Unpublished (1999)

COMMENT Contact: Robert Strausberg, Ph.D.  
Email: [cgapbs-r@mail.nih.gov](mailto:cgapbs-r@mail.nih.gov)  
Tissue Procurement: Dr. Mark Watson  
cDNA Library Preparation: Rubin Laboratory  
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)  
DNA Sequencing by: Agencourt Bioscience Corporation  
Clone distribution: MGC clone distribution information can be  
found through the I.M.A.G.E. Consortium/LLNL at:  
<http://image.llnl.gov>  
Plate: LLCM2385 row: p column: 05  
High quality sequence stop: 697.

FEATURES

source Location/Qualifiers

1..903

/organism="Homo sapiens"

/mol\_type="mRNA"

/db\_xref="taxon:9606"

/clone="IMAGE:6216052"

/lab\_host="DH10B (phage-resistant)"

/clone\_lib="NIH\_MGC\_113"

/note="Organ: spleen; Vector: pOTB7; Site\_1: XhoI; Site\_2:  
EcoRI; cDNA made by oligo-dT priming. Directionally cloned  
into EcoRI/XhoI sites using the following 5' adaptor:  
GGCACGAG(G). Library constructed by Ling Hong in the  
laboratory of Gerald M. Rubin (University of California,  
Berkeley) using ZAP-cDNA synthesis kit (Stratagene) and  
Superscript II RT (Life Technologies). Note: this is a  
NIH\_MGC Library."

#### ORIGIN

Query Match 84.0%; Score 352.8; DB 5; Length 903;  
Best Local Similarity 92.7%; Pred. No. 3.7e-99;  
Matches 382; Conservative 0; Mismatches 27; Indels 3; Gaps 1;

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Qy      12 CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 71
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Db      4  CATGAGGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 63

Qy      72 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 131
        |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||
Db      64 CGACATCCAGATGACCCAGTCTCCATCTTCTGTGTCTGCATCTGTAGGAGACAGAGTCAC 123

Qy     132 CATCACTTGTTCGGGCGAGTCAGGATATT---AGCAGCTGGTTAGCCTGGTATCAGCATAA 188
        |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||  |||||
Db     124 CATCACTTGTTCGGGCGAGTCAGGGTATTAGCAGCAGCTGGTTAGCCTGGTATCAGCAGAA 183

Qy     189 ACCAGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCC 248
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Db     184 ACCAGGGAAAGCCCCTAAACTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCC 243

Qy     249 ATCAAGGTTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCA 308
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Db      244 ATCAAGGTTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACTATCAGCAGCCTGCA 303
Qy      309 GCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGG 368
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Db      304 GCCTGAAGATTTTGCAACTTACTTTGTCAACAGGTTACAGTTTCCCTCAGACTTTTCGG 363
Qy      369 TCAGGGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 420
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Db      364 CGGAGGGACCAAGGTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 415

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Search completed: December 2, 2004, 20:56:38  
Job time : 2187.2 secs